Evaluating the Impact of Value Based Measures on Shareholder's Value Creation in Indian Banks

Dr. Chetana R. Marvadi[1]

Assistant Professor

S.D. SCHOOL OF COMMERCE

GUJARAT UNIVERSITY,

AHMEDABAD- 380009

ABSTRACT

The creation of shareholder value is seen as one of the most important objectives of the firms. For many years, the performances of the companies have been measured in terms of profit or earnings per share. Shareholder value is created by generating future returns for equity investors, which is exceeding the returns that could have been earned by the investors from elsewhere. Determinants of Shareholder value creation can be classified into three categories as: Accounting Measures, Value based Measures and Hybrid Measures. This paper is an attempt to analyse the impact of value based measures on the Shareholder Value Creation for Indian Banking Sector and identify the most contributing value based measure thereby. The study is based on the panel data of total 36 banks out of which, 22 banks are from public sector and 14 banks from private sector for the period of 2004-05 to 2013-14.The results of the study reveal that that EVA has the highest contribution to value creation with very strong relationship as compared to MVA and CVA.

Key words: *Shareholder Value Creation, Value Based Measures, Multiple Regression Analysis*

INTRODUCTION:

The creation of shareholder value is seen as one of the most important objectives of the firms. For many years, the performances of the companies have been measured in terms of profit or earnings per share. However, increasing dissatisfaction with these measures has directed to the development and promotion of whole new array of metrics under the banner of shareholder value. These measures recognize the fact that capital invested in an organization is not free, and it carries a charge for its use in the operations of organization, in terms of cost of capital and hence they have shifted the focus away from profits and towards cash flows. Shareholders are the owners of the corporation and the board of directors as their representatives elected by them. The objective function of the corporation is to maximize the shareholders' value. Managers in most of the developed world must focus on building shareholder's value. If the managers and director do not maximize value, there is always the threat of a hostile takeover. Shareholders as owners of business unions try to increase their wealth, and increasing the wealth causes the assessment of business union favorably, which is very important for business owners.

The Value-based Management (VBM) system is an integrated framework for measuring and managing businesses with the explicit objective of creating superior long-term value for shareholders.VBM is the principle of incorporating the cost of investment into traditional accounting measures, such as profit after tax, in order to manage for the maximum shareholder value. This implies that a company that uses the VBM principles needs to identify those measures that are closely related to creating shareholder value, and incorporate them into strategic decision making.

This paper attempts to analyze the impact of value based measures on the Shareholder Value Creation for Indian Banking Sector and identify the most contributing value based measure thereby.

LITERATURE REVIEW:

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. **Uyemura, Kantor et al. (1996)** calculated the correlations between MVA and EVA including with four accounting measures like net income, EPS, ROE and ROA. The regression analysis measured with the variables as performance measures identified EVA as the most powerful performance measures as compared to other accounting measures to explain MVA and shareholder's wealth. **Fernandez (2002)** defined and analyzed shareholder value creation using the General Electric Company, and concluded that in order to obtain the created shareholder value, the firm must first define the increase of equity market value, the shareholder value added, the shareholder return and the required return to equity. A study by **Singh (2005)** suggested that the relationship between EVA and MVA is statistically significant for Indian Banks. 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. **Rajesh, Raman et al. (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. **Shrikant Krupasindhu Panigrahi et al. (2014)** applied economic measures like Economic Value Added (EVA) and Market Value Added (MVA) combined with the accounting measures to perform a comparative study in order to identify the most appropriate measures and found that very few of the construction companies were having positive EVA for the creation of Shareholder's wealth. It was also found that there is a strong relationship between created shareholder's value and economic value added.

RESEARCH PROBLEM:

The determinants of shareholder value creation can be broadly categorised into three categories: Accounting Based Measures, Value Based Measures and Hybrid Measures. Measures based on accounting information cannot meet shareholders and creditors' need for measuring shareholders' wealth and created value. Therefore, some measures were needed based on economic information and value creation. Some of those measures are: Economic Value Added, Market Value Added and Cash Value Added, which are the measures based on value. It has been found from the past literature that shareholders are less attracted to the Indian Banking sector while investing their money in the capital markets. Banking sector is considered to be more of a service sector rather than a value creating sector. Hence there is a need to identify the reasons for this and find out the ways for making this sector more attractive to the shareholders. This research evaluates how value based measures contribute in creating the Shareholder's value in Indian Banking Sector and thereby identify the major contributor to value creation in this Sector.

RESEARCH METHODOLOGY:

RESEARCH OBJECTIVES:

This research is a causal research with the goal to analyze existing relations among variables affecting Shareholder Value Creation in Indian Banks. The followings are the main research objectives:

1. To   evaluate individually effect of   value based measures on shareholder value creation
2.   To identify major contributor amongst the value based measures for shareholder value creation for Indian Banking Sector
3.

SAMPLING DESIGN:

The study uses panel data of Banks listed on Bombay Stock Exchange (BSE) for the period from 2004-05 to 2013-14. Banks with missing data are excluded from the study. Our final sample size is 36 Banks, 22 from Public Sector and 14 from Public sector for each period from Indian Banking Sector. The study is based on secondary data collected from Ace-Knowledge and Research Portal and Annual Reports of the banks collected from bank websites. The list of the banks in the final sample is given in the table below:

Table-1 Sample Descriptions

Public Sector Banks	Private Sector Banks
State Bank of India (SBI)	**Old Private Sector Banks**
Bank of Baroda (BOB)	Federal Bank Limited
DENA Bank (DENA)	ING VYSYA Bank Limited
CANARA Bank (CANARA)	Karnataka Bank Limited
IDBI Bank (IDBI)	KarurVysya Bank Limited
UNION BANK Of India (UBI)	Lakshmi Vilas Bank Limited (LVB)
Syndicate Bank	South Indian Bank Limited
Bank of Maharashtra(BOM)	City Union Bank Limited
Allahabad bank	**New Private Sector Banks**
Andhra Bank	Axis Bank Limited
Central Bank of India (CBI)	Development Credit Bank Limited (DCB)
Indian Bank	HDFC Bank Limited
Indian Overseas Bank (IOB)	ICICI Bank Limited
Punjab National Bank (PNB)	INDUSIND Bank Limited
UCO Bank	Kotak Mahindra Bank Limited
Vijaya Bank	YES Bank Limited
Bank of India(BOI)	
Corporation Bank	
Oriental Bank of Commerce (OBC)	
State Bank Bikaner & Jaipur (SBBJ)	
State Bank of Mysore (SB Mysore)	
State Bank of Travancore (SB Travancore)	

Model Specification:

Shareholders always search for ways in analysing manager's performance towards wealth creation for companies but in reality they use unsuitable measures for this. Misusing of suitable measures for this and value creation of shareholders does not identify real value for companies. An attempt is made here to establish the relationship between accounting and economic value creation measures to study their individual contribution in value creation.

The multi-variable regression model assumes that dependent variable is the functioning of several independent variables and an error:

$Y_i = \beta_0 + \beta_1 x_{1i} + \beta_{2i} x_{2i} + \beta_3 x_{3i} + \epsilon_i$

Where,

Y=Shareholder Value Creation

X_1= Economic Value Added

X_2 = Market Value Added

X_3 = Cash Value Added

The following models are used for this analysis:

Model-1: Effect of EVA

Dependent Variable: Shareholder Value Creation (SVC)

Independent Variable: EVA,

Model-2: Effect of MVA

Dependent Variable: Shareholder Value Creation(SVC)

Independent Variable: MVA

Model-3: Effect of CVA

Dependent Variable: Shareholder Value Creation(SVC)

Independent Variable: CVA

Model-4: Combined Effect

Dependent Variable: Shareholder Value Creation (SVC)

Independent Variable: EVA, MVA, CVA

The variables used for this purpose are defined as under:

Table-2 Variable Descriptions

Variable Name	Description
Dependent Variable:	
Shareholder Value Creation (SVC)	Shareholder Value Creation = Operating Income – (WACC * Net Assets).
Independent Variables:	
MVA	Market Value of Equity – Total Capital
CVA	Cash Flows Of Operating Activities – Taxes – (Interest + Dividend).
EVA	NOPAT - (IC_{t-1} * WACC%)
NOPAT	Operating Profit(1-Tax Rate)
Capital Employed	Equity Capital + Reserves + Debt Capital
WACC	(Debt Capital * Rate Of Interest Post Tax) + Equity Capital * Rate Of Cost Of Equity) / Total Capital Employed
Cost Of Equity (Ke)	(Risk Free Rate + Risk Premium) * Beta
Business risk (BETA)	It is measured by asset beta is used to account for the volatility in a firm's earnings and value. Asset beta is calculated as the equity beta of a firm multiplied by total assets that is $\beta E \times TA/E$. Total assets are used as proxy for the firm's value.
Cost Of Debt (Kd)	Total Debt * Rate of Interest Post Tax

DATA ANALYSIS AND INTERPRETATION:

DESCRIPTIVE STATISTICS:

Table-3 Descriptive Statistics

	Overall Banking Sector		
Variables	**Mean**	**Std. Deviation**	**CV(%)**
MVA	27608.51728657	171520.70856626 29	621.2601
EVA	1662.05854988	2449.621888575	147.3848
CVA	952.57156409	5550.514298734	582.6874
SHAREHOLDER VALUECREATION	2725.01211845	4152.884163154	152.3987
N	360		

The above table shows descriptive statistics of the variables of the study. *EVA has the least* CV which indicates that it is a most uniform variable and the variable CVA has highest CV indicates that it has highest variation and does not have uniformity.

CORRELATION ANALYSIS:

Table-4 Correlation Analysis for Overall Banking Sector:

	MVA	EVA	CVA	VALUE CREATION
MVA	1.000 (0.000)			
EVA	0.693* (0.000)	1.000 (0.000)		
CVA	0.101* (0.028)	0.217* (0.000)	1.000(0.000)	
SHAREHOLDER VALUE CREATION	0.763* (0.000)	0.957* (0.000)	0.163* (0.001)	1.000 (0.000)

"*" indicates 5 % level of significance

The above table present the Correlation Matrix which shows the Correlation between the variables under study. MVA has positive significant Correlation with all the variables. The EVA has positive significant Correlation with almost all the variables. CVA has positive significant relation with Shareholder Value Creation. Shareholder Value Creation has positive significant correlation with almost all the variables. Significant correlation coefficients are indicated by "*" at 5 % level of significance.

REGRESSION ANALYSIS:

1. *Analysing the impact of individual value based measures on shareholder value creation*

Table-5 Regression Results for Model-1, 2, and 3

Dependent Variable: Shareholder Value Creation								
Model-1			**Model-2**			**Model-3**		
	Coefficient	p-Value		Coefficient	p-Value		Coefficient	p-Value
(Constant)	29.696	0.701	(Constant)	2214.760	0.000	(Constant)	2608.612	0.000
EVA	1.622*	0.000	MVA	0.018*	0.000	CVA	0.122*	0.002
R Square	0.915		R Square	0.583		R Square	0.027	
F Change	3854.211*		F Change	499.818*		F Change	9.811*	
Sig.F Change	0.000		Sig.F Change	0.000		Sig.F Change	0.000	

Estimated Model-1:

Shareholder Value Creation=29.696 +1.622EVA

The result of Regression analysis shows that EVA is having a significant positive impact on Shareholder Value Creation. The significant parameter estimates at 5% significance level are indicated by a star against their values. R-square value indicates that the model is very strong and91.5% of the variation in Shareholder Value Creation is explained by the EVA. F-test for R-square indicates that R-square is significant.

Estimated Model-2:

Shareholder Value Creation=2214.76 + 0.018MVA

The result of Regression analysis shows that MVA is having a significant positive impact on Shareholder Value Creation. The significant parameter estimates at 5% significance level are indicated by a star against their values. R-square value indicates that the model is moderate with 58.3% of the variation in Shareholder Value Creation is explained by the MVA. F-test for R-square indicates that R-square is significant.

Estimated Model-3:

Shareholder Value Creation=2608.612 +0.122CVA

The result of Regression analysis shows that CVA is having a significant positive impact on Shareholder Value Creation but the effect of CVA on Shareholder Value Creation in the joint model-4 is negative. The significant parameter estimates at 5% significance level are indicated by a star against their values. R-square value indicates that the model is very weak since only 2.70% of the variation in Shareholder Value Creation is explained by the CVA. F-test for R-square indicates that R-square is significant.

2. Analysing the joint impact of all value based measures on shareholder value creation

Table-6 Regression Results for Model-4

Dependent Variable: Shareholder Value Creation	Coefficient	p-Value
(Constant)	276.674	0.000
EVA	1.413*	0.000
MVA	0.005*	0.000
CVA	-0.028*	0.008
R Square	0.936	
F Change	1724.138	
Sig.F Change	0.000	

Estimated Model-4:

*Shareholder Value Creation=*276.674 +1.413*EVA*+0.005MVA-0.028CVA

The above results indicate that EVA is the highest contributing variable to Shareholder Value Creation.   CVA has inverse relationship with Shareholder Value Creation, which indicates that increase in CVA of banks will lead to decline in Shareholder Value Creation. The value of R-Square is 0.936 which indicates that 93.6% of total variation in Shareholder Value Creation is jointly explained by the independent variables.

The above analysis indicates that EVA has the highest contribution to Shareholder Value Creation with very strong relationship as compared to MVA and CVA.

FINDINGS:

The results of analysis of the variables used for this analysis give the following major findings:

- For overall banking sector, MVA has positive   significant Correlation with all the variables. The EVA has   positive significant Correlation with almost all the variables. CVA has positive significant relation with Shareholder Value Creation. Shareholder Value Creation has positive significant correlation with almost all the variables
- The results of Regression analysis of Model-1 show that EVA has a significant positive impact on Value Creation.
- The results of Regression analysis of Model-2 show that MVA is having a significant positive impact on Value Creation.
- The results of Regression analysis of Model-3 show that CVA is having a significant positive impact on Value Creation, but the effect of CVA on value creation in the joint Model-4 is negative.
- The results of combined effect in Model-4 indicate that EVA is the highest contributing variable to shareholder value creation.   CVA has inverse relationship with value

creation, which indicates that increase in CVA of banks will lead to decline in value creation.

- Thus, the above analysis indicates that EVA has the highest contribution to value creation with very strong relationship as compared to MVA and CVA.

CONCLUSION:

The present analysis indicates that the Indian banks may get better value by analysing the major value based determinants such as EVA and MVA. They have a better scope of applying value based measures to generate economic profit rather than accounting profit in order to create higher shareholder value. Since EVA is found to be a major contributor in shareholder value creation, Indian banks should concentrate more upon increasing their EVA in order to create higher shareholder value.

REFERENCES:

- *Boston Consulting Group (2008), Creating value in banking 2008: managing shareholder value in turbulent times; BCG Report*

- *G. Bennett Stewart (1991)," The Quest for Value: A Guide for Senior Managers", Harper Collins Publication*

- *I.M. Pandey (2005)," What Drives The Shareholder Value?",AAMJAF,Vol. 1, 105–120, 2005,Asian Academy of Management Journal of Accounting And Finance.*

- *Mahdi Salehi, HashemValipour and Zahra Yousefi(2011)," A Study of Value Creation Criteria: An Iranian Scenario", African Journal Of Business Management Vol.5 (10), Pp. 3866-3877, 18 May 2011*

- *Pablo Fernandez (2002)," A Definition of Shareholder Value Creation", Research Paper No.448, January 2002, Research Division IESE, University Of Navarra, Spain.*

- *Rajesh, M., R. Raman and R. Narayan (2012). "An Empirical Study on EVA and MVA Approach." International Journal of Marketing, Financial Services & Management Research, Vol.1, Issue (3). IJEMR – February 2016 - Vol 6 Issue 02 - Online - ISSN 2249–2585 Print - ISSN 2249-8672 Page 11 of 11 www.aeph.in 6)*

- *Rappaport, A. (1986)," Linking competitive strategy and shareholder value analysis", The Journal of Business Strategy, Vol.(9): pp.391-419*

- *ShrikantPanigrahi et al.(2014),'Linkage of Management Decisions To Shareholder's Value: EVA Concept", International Journal Of Finance & Banking Studies IJFBS,Vol.3 No.1, 2014,pp.114-125,ISSN: 2147-4486,Available Online At www.Ssbfnet.Com*

- *Singh, Prakash (2005), "EVA in Indian Banking: Better Information content, More Shareholder Value", ABHIGYAN, Vol. XXIII, No. 3, October-December 2005, pp. 40-49.*

- *Uyemura, D. G., C. C. Kantor and J. M. Pettit (1996). "EVA® for banks: Value creation, risk management, and profitability measurement." Journal of Applied Corporate Finance, vol.9, issue (2): 94-109.*

****