ANALYSIS OF EVA FOR SBI AND HDFC WITH THE IMPACT ASSESSMENT OF WACC AND DIVIDEND OVER SHARE HOLDER VALUE CREATION

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ABSTRACT

Many Indian listed banks look forward to the long term growth and increase the share holder base for the near future but the path to this does alone leads from marketing and other customer relationship techniques, here financial data analysis captures the nerve. The introduction of EVA is not old enough in the financial market but still untouched in Indian scenario. EVA tries to capture the economic value created by the company for the share holder. It is the actual measurement of the performance. Here we try to calculate EVA of SBI and HDFC for a period of 2005-2011 (pre and post recession) and try to establish its relation with old ratio analysis techniques of profitability calculations. Here an attempt has also been made to assess the various factors which effect the share holder value creation in the market of the these two banks together.

Key words: EVA, SVA, SBI, HDFC, economic value, share price, WACC

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INTRODUCTION:

Bank is a financial institute which accepts deposit and lends loans to customers. It also provide cash management services for customers. Banking was started in India in 17th century but was full-fledged into working after "Banking Regulation Act 1949."

The largest bank "Imperial bank of India' was nationalized in 1965 and named as State bank of India . Narsimhan committee report in 1991 did unbelievable changes in the Indian banking sector . It paid more emphasis on the regulating and liberalizing Indian banking sector. Over the period of time in banking lots of changes took place in terms of total assets mobilization and other profitability factors. NPV was one of the biggest hurdle for calculating profitability with problem banks hence they launched sophisticated risk management technique to put and break on NPV mounting problem, with help of which bank fulfilled BASELL II guideline adequacy ratio of 8%. Although 9% adequacy ratio was set by RBI to maintain safety of banks at end of 2008 risk weighted asset ratio was 13.4%. Additional 1.75 lakh crore equally capital required more to create sustain shareholder wealth. For this bank have been brining several plans to tap equity fund from the market.

Developments in banking sector is expected to have measurements for operating performance and hence increase profitability of the banking sector and to measure their profitability certain traditional technique were followed like: Return on capital employed(ROCE) :It calculates earning before tax and profit to that of capital employed .Formulated as earning before tax and profit/ capital employed having advantage that it is very useful for capital intensive sector to measure their financial performance, cons adjustment done sometimes.

1) Return on net worth(RONW) :It is used to analysis investor returns .Formulated as net after tax profit/shareholder capital +retained earning or Net Income/Shareholder Equity. Efficient use of resources is its advantage while smaller book values leads to large inflation.

2) Earning Per Share(EPS) :It is position of profit total given to each outstanding share of common stock earning, which is Formulated as Net income-dividend on preference stock/Average outstanding share. Identification of share price can be done very easily but does not measure present value and forecasting not possible.

Modern Technique:

Cash flow return on Investment(CFROI):It measures operational performance of any organizational sector Which is measured by Gross operating cash flow/capital employed. If its value is (positive) means profitability of share holder increases .

Shareholder Value Added(SVA): It measures incremental value of business to shareholder. SVA= Net operating profit after tax/cost of capital, It helps in long term financial forecast and strategic decisions , but highly complex.

Economic value added(EVA): It measures and compare net operating profit to total cost of capital. Formulated as :not operating profit after tax- (capital invested*wacc). It is important indicator to determine the company profitability and reflects performance of management.

EVA is an important factor in share holder value creation. This method is known as entity method. The deposited franchise given by banking license gave bank an option to create value on the liabilities side of balance sheet . It is a major part of operations of bank and it is not pure financing .Hence equity approach is applied.

The process used to calculate EVA cost of equity ke =Rf+beta(Rm-Rf) also known as CAPM model. Where Rf= risk free rate of returne=market rate of return.

In equity approach EVA=(net profit after tax+Depreciation+non-recurring expenses adjusted foe tax- non recursive income)-(capital*cost of equity). Certain influencing factors are rate of return, economic rate of return ,cash flow etc.

This calculation benefits goes beyond calculating net income .It adds asset to business that create return above cost of capital. It depends on invested capital and use in asset intensive companies generally stable. Mainly used in banking and automobile sector

LITERATURE REVIEW:

Comparison of traditional technique along with modern one shows an upper hand of EVA underwritten context supporting it:

Lenn.K.Makeja (1996) Studied EVA and MVA performance measures and found that EVA is a tool operating to formulate strategic decision of any sector. Even Banerjee Ashok(1997) He has studied on EVA as performing tool over technique in compression by him he found EVA as an good technique over other. Patel Ritesh(2009) He has studied impact of EVA on share price collected data analyzed using mean, median ,standard deviation etc Result shoes a very significant impact of EVA on financical sector. Banerjee Ashok and Jain(1999)They studied economic value and share holder wealth. Their data was empirical, applied backward integration and found EVA to be best in furcating strategic decisions.

SoralG and Bhanwat shurveer(2009)They have studied share holder value creation in the Indian banking Industries. They also studied correlation between traditional and modern technique,the sample size the choose consisting of 14 nationalized and 12 private sector bank. Base on the relevant data they did intersectorial comparission which result in conclusion that still modern techniques are given less importance than traditional technique and performance comparission on traditional technique gave an satisfactory result only. PandyaBhargav and Mehta Shantanu(2013)They made study based on shareholder value in Indian Banks .Studied and did a comparative analysis to study share holder values of public and private sector bank. Study reveled out that shareholder value during the study period have highly correlation in year 2010 before it was negatively correlated as modern technique still in unseen mode till that time.

Vasile Burja(1998):Studied EVA and shareholder interest as an major objective of companies .He have studied comparison based on CA, NOPAT, WACC, ROIC and EVA .The eva was negatively correlated in his observation which shows still companies preferred traditional technique rather than modern technique. Jaloja(2010): Studied comparison b\w old and new generation comparing considered sample of 50 Companies rooted that old companies generate more shareholders value than new generation companies. There was positive co-relation b\w companies . According to his study value creation does not depend upon size of company.

Chauhan (2012): Analyzed shareholders value creation in Indian petroleum industry. Study analyzed factor such as MVA,PAT NODAT,EVA,EBS for a period of 10 years. T test has been applied and result was both sector have positive EVA and MVA. Bhasin(2013): He studied financial management is to maximize the shareholders value. His main objective was to study share holder effectiveness and to analyze EVA over traditional measures. ANOVA was applied on the data and result indicated EVA a superior technique over other techniques.

Haque etal(2013): Studied relationship b\w EVA of division buyout in the period of 2004-2005 and 2010 to 11. His study explained that their is negative correlation b\w EVA and dividend payout.

RESEARCH METHODOLOGY:

Research objectives

1) To calculate the share holder value (EVA) of SBI and HDFC from a period of 2005-2011. (i.e. EVA of State Bank of India and HDFC ltd pre and post recession period (2008)) and to make a comparison between the EVA of SBI and HDFC in the longitudinal time frame from 2005-2011

2) Comparison of EVA with other profitability ratios which are commonly used by banking industry.

3) Assess the impact of Dividend and Capital Structure (WACC) over share holder value creation, having NULL hypothesis that both dividend and capital structure do not affect the share holder value

Study variables:

WACC: Cost of equity+ Cost of debt

Return on Capital (ROC) = Net operating profit after tax/capital invested

Economic value added (EVA) = Return on capital - Weighted average cost of capital

Net operating profit after tax = Earning/Profit adjusted with effect of Tax

ROA= Net income/Total Assets

EPS=[Net income – Div on preferred stock(if any)]/Average outstanding shares

PE Ratio= Price per share/Earning per share

Profit Margin= Net income/ Net Sales

Asset productivity= Revenue/ Property,plat,equipment

Net interest margin= (Investment Returns-Interest expenses)/Average earning assets

Data Collection:

The secondary data is collected from the balance sheets of the banks of various years fetched from Prowess database. Data sources used for calculations are Balance sheet, P&L account. Some websites like money-control and yahoo finance are also referred.

Result and Analysis:

The EVA analysis is done in the following steps:

1) Calculation of WACC for the given year brackets

2) Calculation of EVA from the above information

3) Evaluation of Pearson correlation between EVA and other economic profit financial profit indicators

4) Regression analysis to study the impact of WACC and dividend over EVA

Computation of WACC

The cost of capital of each source is calculated separately and then the weights can be assigned either on the market value basis or book value basis. As Stern and Stewart suggested market value so we would be taking the market value for calculation

WACC= Equity/ Capital employed*Ke + Long term borrowing/Capital employed*Kd

Cost of Debt (Kd) = (Total interest Expenses/ Net proceed) * (1-Tax rate) * 100

Cost of Equity (Ke) = Risk free rate+ beta(Market Return-Risk free rate) (CAPM model)

The information of Interest expense was taken up from the published data of banks, For risk free rate of Return the annual government 365 T bills were considered and market rate of return was taken up from the annual published data of S&P CNX NIFTY. Although the beta estimate was also available from Bank NIFTY but we assumed beta from CNX NIFTY

TABLE 1

Beta, Rf and WACC of SBI and HDFC

	2005-06	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**
Beta of SBI	0.98	0.83	0.91	0.88	1.08	0.95	0.9
Beta of HDFC	0.67	0.83	0.93	0.89	0.68	0.79	0.81
365 T bill	4.55%	4.53%	4.73%	4.92%	4.65%	4.51%	4.13%
WACC SBI	7.67%	7.85%	7.04%	6.67%	6.20%	5.69%	5.72%
WACC HDFC	8.12%	7.90%	7.08%	7.40%	6.79%	6.19%	6.35%

With the following information WACC was calculated by using the information snippets from data available from balance sheets and income statements of the banks.

This data will be further used to calculate the EVA of the two companies

Computation of EVA

EVA= NOPAT-WACC*CapEmp

NOPAT= Net operating profit after tax (Net profit + Contingencies + Interest Exp -Tax)

WACC= Weighted average cost of capital

CapEmp= Capital Employed (Net worth +Total Debt)

With the following the EVA of SBI and HDFC came to be as follows for the period between 2005-2011:

TABLE 2

EVA of SBI and HDFC (In Crore)

	2005-06	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**	**Mean**
EVA SBI (In Cr)	4210.8	4070.9	**370.1**	5834.9	9323.4	7626.2	6435.7	5410.285
EVA HDFC (In Cr)	780.2	1105.3	**653.8**	1135.5	2076.8	3195.4	4269.7	1888.1

From the above table it can be seen that the minimum value creation was done by both the banks in 2007-08 as compared to the years before and after the Recession. While the maximum was done by each of them at different time.

By calculating the incremental EVA (Table 3) we can see the difference/dip in the EVA from the previous year and the maximum gap can be seen is created due to 2007-8 recession period.

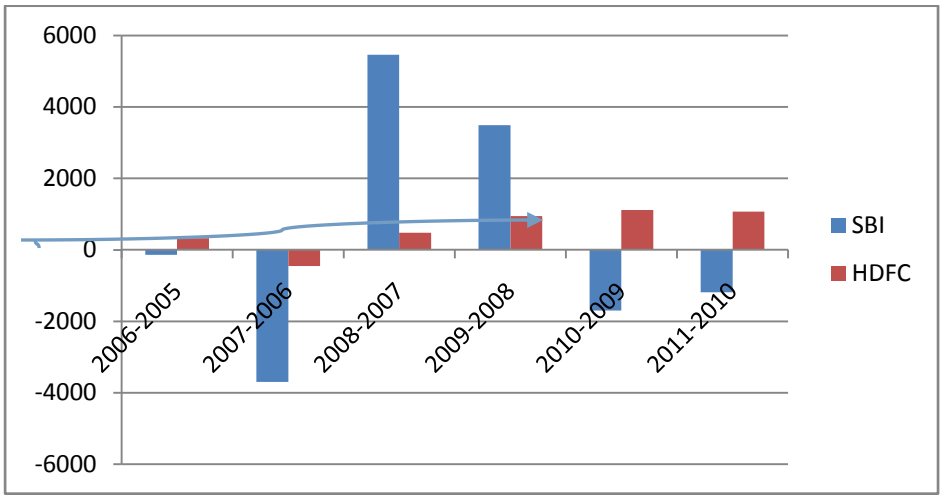
TABLE 3

Incremental EVA(t) = EVA(t)-EVA(t-1)

	2006-2005	**2007-2006**	**2008-2007**	**2009-2008**	**2010-2009**	**2011-2010**
SBI	-139.9	-3700.8	5464.8	3488.5	-1697.2	-1190.5
HDFC	325.1	-451.5	481.7	941.3	1118.6	1074.3

The graphical representation of Incremental EVA(t) is :

FIGURE 1: Incremental EVA of SBI and HDFC



From the figure 1 and Table 3 it can be seen that incremental rise in the value creation has been seen in the year 2008-09 as it shows the highest increase. Moreover as per HDFC (Trendline) shows that there has been a gradual increase in the incremental value creation by the bank unlike SBI where there was a sudden dip in EVA after 2009.

Computation of Correlation coeff. With EVA

TABLE 4a

Corelation of EVA with other profitability ratios of SBI

SBI	**2005-06**	**2006-07**	**2007-08**	**2008-09**	**2009-10**	**2010-11**	**2011-12**
Earning per share	0.81	0.71	0.68	0.58	0.71	0.67	0.88
PE Ratio	0.41	0.23	0.11	0.26	0.45	0.53	0.51
ROA	0.59	0.45	0.21	0.36	0.48	0.27	0.38
Profit Margin	0.36	0.27	0.14	0.39	0.42	0.46	0.35
Asset Productivity	0.13	0.18	0.09	0.15	0.20	0.23	0.12
Net Interest Margin	0.06	0.13	0.14	0.19	0.25	0.19	0.13

TABLE 4b

Corelation of EVA with other profitability ratios of HDFC

HDFC	2005-06	2006-07	2007-08	2008-09	2009-10	2010-11	2011-12
Earning per share	0.61	0.52	0.35	0.46	0.73	0.52	0.68
PE Ratio	0.35	0.27	0.13	0.34	0.48	0.58	0.45
ROA	0.37	0.28	0.15	0.26	0.34	0.25	0.40
Profit Margin	0.16	0.20	0.11	0.22	0.31	0.38	0.43
Asset Productivity	0.14	0.19	0.15	0.21	0.23	0.19	0.25
Net Interest Margin	0.13	0.10	0.09	0.13	0.21	0.17	0.10

Karl pearson correlation has been used to find the correlation between the economic profitability indicators with EVA. This relation is evaluated from 2005-2011 , for a complete time series and and from the table it can be seen that are very low in case of profitability relation ratios like ROA, Proft margin, asset productivity etc. This shows that financial profit made by banks is not converted or passed into the economic profits of the SBI and HDFC. From all the above ratios it can be seen that the Net interest margin has comparatively grown for the certain period, this may be due to the net asset liability management of the banks.

Impact assessment of DPS & Capital Structure on share holder value creation

Although there are many factors which affect the share holder value creation but we would be studying the impact of capital structure and dividend. As the capital structure is calculated in the above procedure and the annual dividend payment is also available from the officially released data by the banks. Here we would take DPS and WACC as independent variable which will effect our dependent variable i.e. value creation.

In order to remove the effect of seasonality (if any) we would take the LOG value so as to get the data removed from variation.

$Y = a + b1X1 + b2X2 + e$

Y= Share holder value creation

X1 = Dividend value

X2 = WACC

e= Error

b1&b2= coefficients of regression

TABLE 5a:

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics	
					F Change	Sig. F Change
1	.663[a]	.440	.433	.51026	64.462	.000*

Significant at p<0.05

Predictors: Constant, Eq, Div, Debt
Dependent variable: Share holder value

TABLE 5b:

Model Summary including coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std.Error	Beta		
(Constant)	2.643	.498		5.912	0.000*
Dividend	.367	.180	0.315	2.086	0.046*
WACC	.352	.081	0.617	4.207	0.000*

Significant at p<0.05

Dependent variable: Share holder value

The above analysis proves that both dividend and WACC play an important role in influencing the share holder value creation. As the significant value is less than 0.05 so the null hypothesis is rejected hence proving that Dividend and WACC play a part in influencing the share holder value creation. As the value of R is 0.663 showing the presence of high positive relation between dependent and independent variable. The R square value of .440 shows that 44% of variance is explained by the independent variable together. It also shows that the rest 56% of the variance would be explained by the other factors which are not covered in this paper. As the significant level for dividend and WACC is less than 0.05 which shows that they play a significant role in effecting the share holder value creation.

LIMITATION AND FURTHER SCOPE:

In this study we have tested our model with only two nationalized listed banks i.e. SBI and HDFC but this model can be extended to the other nationalized public and private sector banks which are listed in the NSE/BSE (capital market). We can also extend the period of study from 2003 to 2015 and can do a comparative study of pre and post recession timeline. Although in applying the regression model we estimated it with only two independent variables leaving 56% of the information unknown, which can be collected by introducing various other factors as variables in the model and performing the work in the controlled environment (excluding seasonality and latent variable effect)

EVA is generally used in the banking sector to reach to the conclusion of Market value of equity and to analyze the current market price we add the present value of future EVA along with the present day market cap of the company. A genuine attempt has been made by the author to calculate the EVA and asses the factors impacting EVA of the company.

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