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Growth Performance Analysis - A Comparative Study Between SBI and HDFC Bank Limited

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Abstract: The paper compares the growth performance of SBI and HDFC Bank in terms of affiliation and association between earnings and growth performance indicators for the period from 2005-06 to 2014-15 using secondary data with the application of descriptive methods of statistical analysis including multiple regressions. In view of the fact that the growth performance of the banking sector is straightforwardly connected to the economy but it is estimated to have slow down remarkably because of ongoing crisis in Europe and economic slowdown in the United States. Hence the research paper is an effort to study the Growth rate in SBI and HDFC Bank limited as both the banks are giant banks in public and private sector, so a Comparative study of Growth analysis of both the banks for a period of 10 years is made. The main parameters of growth in banks are Reserve and Surplus growth (RES), Advance growth (ADV), Investment growth (INV), Interest Earned growth (IE), Operating Expenses growth (OE), Equity Dividend growth (ED), Net profit growth (NP) and EPS growth (EPS) and Descriptive statistics shows that the growth performance of HDFC bank is very pleasing than SBI during the period under study and the multiple regression test results reveal that in terms of the parameters defined HDFC Bank has performed much better than SBI Bank.

Keywords: Growth, Banks, SBI, HDFC Bank, Descriptive Statistics, Multiple Regressions

1. Introduction

The performance of an economy is very much connected with the performance of the financial sector of that economy. Financial sector comprise a very important ingredient in any economy. The financial sector of India is gaining strength over the years and its contribution to growth is overwhelming. Banks are considered the main component of Indian Financial Sector. A good performance of banking sector itself indicates the overall good performance of the sector, which ultimately leads to improved performance of economy. India has witnessed exceptional revolution in the banking sector in the last two decades. Banking today has been redefined and re-engineered with liberalization of interest rates and credit allocation policy. Traditionally, banks were involved in accepting deposits from public at a lower rate and issuing loans at a higher rate and thereby making profit on interest margin. Banking sector reforms aimed at, introduction of new indirect monetary policy, strengthening prudential regulation, opening the financial sector to foreign financial institutions and promotion of the capital market.

Therefore the need to identify the determinants of growth performance of banks in the India as well as other country context has gained importance. Researchers have tried to analyze bank performance based on external and internal variables in various country contexts (Gizyeki, 2001). External variables include rate of economic growth, industry-wide developments, inflation, money supply, economies of scale and scope, dynamics of bank competition, global presence of financial conglomerates, disintermediation in banking activities and other macroeconomic factors; while bank specific internal variables mean an increase in the business over a period of time in the areas of Reserve and Surplus growth (RES), Advance growth (ADV), Investment growth (INV), Interest Earned growth (IE), Operating Expenses growth (OE), Equity Dividend growth (ED), Net profit growth (NP) and EPS growth (EPS) of the current year in comparison to previous year (Pathak, 2011).

The performance of the Indian economy is one of the strongest drivers for the banking industry's growth and vice versa and the average GDP growth of 8.1 per cent expected over 2011-16 will smooth the progress of the growth of the banking sector (IBEF, 2011). The growth of the banking sector is directly associated to the economy than possibly that of any other sector. The growth of the Indian economy is expected to

have decelerated notably from 8.39 percent in the year 2011-12 to 6.88 percent in the year 2012-13 because of ongoing crisis in Europe and economic decelerate in the United States disturbing foreign investments coming into India, policy paralysis considering the government's lethargy on diverse policy issues and reforms, fiscal deficit, high inflation leading to high interest rate and rupee depreciation that additionally weakens the current account deficit (KPMG report, 2013, p.3). However, the Indian banks observed a mixed trend in their profitability in 2012-13. Despite the fact that the average pretax profit of the banks increased by 16.46 percent, the private sector banks significantly outperformed their public sector counterparts (28.38 percent vs. 9.85 percent). In this way, the net interest margin for most of the banks declined apart from SBI and HDFC because of higher cost of bulk deposits and a slowdown in the credit growth (KPMG report, 2013, p.6). Keeping in view of this, the present research work examines and evaluated the growth of SBI and HDFC bank as a factor accountable for these banks play an important role in mobilizing the financial savings and deployment of those to the sectors of production.

2. Review of Literatures

Diversification has been one of the most frequently researched areas in strategic management literature and to some extent in finance. Many studies have been conducted on factors influencing performance of banks. The internal determinants originate from the financial report of the bank concerned and are often termed as micro or bank-specific determinants of profitability. The external determinants are those forces that reflect the economic environment which conditions the operation and performance of financial institutions.

Panda and Lall (1991) had identified certain factors which influence the profitability improvement of banks to the great extent. They argued that branch expansion is one of those factors which can impact on profitability. Rammohan and Ray (2004) concluded that with regard to the revenue maximizing efficiency, public sector banks are significantly better than private banks but they found no significant difference between public and foreign banks on this parameter. Kumar (2006) observed that the bank nationalization in India marked a paradigm shift in the focus of banking as it was intended to shift the focus from class banking to mass banking and efforts are also being made internationally to study causes of financial inclusion and designing strategies to ensure financial inclusion of the poor disadvantaged. He argued that the banks also need to redesign their business strategies to incorporate specific plans to promote financial inclusion of low income group treating it both a business opportunity as well as a corporate social responsibilities and financial inclusion can emerge as commercial profitable business. Venkatesan (2007) viewed that the net interest margin has come down over the last one decade with increased competition in the banking industry. He viewed that banks will look for fee based income to fill the gap in interest income. Bennaceur and Goaied (2008) examined factors affecting profitability for the period 1980-2000 and suggested that capital and overhead expenses are positively related to profitability level. Kosmidou (2008) findings suggest that the more profitable banks have higher level of capital and lower cost to income ratio. Manoj (2010) argued that enhanced profitability and efficiency has become vital for survival and growth of the banks in the era of globalization and significantly affected by asset quality, capital adequacy and liquidity of the banks. Ghosh (2010) examines the interplay between credit growth bank soundness and financial fragility in Indian banks. The soundness of banks is measured by their distance to default. Loan growth is often directly associated with soundness but an extension could weaken bank soundness. Anjum and Deepika (2012) made a comparative study of the profitability of the Indian Banking Sector and the impact of technological investment on the profitability of the Public and Private Sector Banks. They argued that Indian Banking Industry in technological advancement is still in gestation phase and RBI has to take various steps so that the Public Sector Banks (Nationalized and SBI & its Associates) becomes able to manage their profitability by striking the balance between technological Investments (Expenditures) and Incomes. Ayyappan and Sakthivadivel (2012) found that compound growth rate of the private sector banks is comparatively higher than that of the public sector banks. The banks were grouped into two categories: i.e., Public Sector Banks Group (22 banks) and Private Banks Group (15 banks). Their study predicted that at the current rate of growth the private sector banks can pose a challenge in the market place and may even overtake the public sector banks in the longer period of time. The study does not provide any idea regarding the growth of any individual or frontline public and private sector commercial banks but the growth picture at macro level.

A significant number of studies on performance of banks have already been undertaken. Though profitability and efficiency of the banks have become most fascinating area for study but with the view of growth in economy, the importance of financial performance in banking sector cannot be ignored. The comparative analysis of growth performance among two leading banks i.e. SBI and HDFC bank before and after the world economic crisis of 2008 at bank level is an area which has not yet explored.

The conclusive sum of this retrospective review of relevant literatures produced till date on the offered subject reveals wide room for the validity and originates of this work and reflects some crucial clues that affirm its viability, as may be marked here it. No study has incorporated the growth performance of two leading Banks under study in India. The comparative analysis of growth performance among SBI and frontline new private sector commercial banks as well as growth performance before and after the world economic crisis of 2008 at bank level is an area which has not yet explored. The present study will try to analyze and compare the growth of the largest public sector SBI and the new private sector bank HDFC.

The Banking industry occupies a unique place in a nation’s economy. A well developed banking system is a necessary precondition for economic development in a modern economy. Keeping in view, the importance of banks in nation’s

development, the general objective of the study is to evaluate the overall growth performance of two leading banks in India – SBI and HDFC in private and public sector over a period of 10 years (2005-06 to 2014-15). More specifically, the intention of the study is to:

- To study the growth rate of both the banks under study.
- To compare the growth of the banks in private and public sector.

3. Materials and Methods

3.1. Sources of Data

The study is based on secondary data obtained from annual reports of the particular banks and from the website ofDion Global Solutions Limited. In addition, the facts, figures and findings sophisticated in related past studies and the government publications are as well used to complement the secondary data.

3.2. Research Design

Since growth performance of a banking business means an increase in the business over a period of time in the areas of Reserve and Surplus growth (RES), Advance growth (ADV), Investment growth (INV), Interest Earned growth (IE), Operating Expenses growth (OE), Equity Dividend growth (ED), Net profit growth (NP) and EPS growth (EPS) of the current year in comparison to previous year. So we have measured growth performance ratio encircling the absolute information using the sample period extents from 2005-06 to 2014-15; nevertheless, there are 9 observations. Eviews 7.0 package program and SPSS have been utilized for coordinating the data and carrying out of statistics and econometric analyses.

3.3. Variable Used

In the present study, Reserve and Surplus growth (RES), Advance growth (ADV), Investment growth (INV), Interest Earned growth (IE), Operating Expenses growth (OE), Equity Dividend growth (ED), Net profit growth(NP)and EPS growth(EPS). EPS growth is taken as dependent variable and seven main factors that affect the growth performance have been taken as independent variable for the present study.

3.4. Tools Used

In the course of analysis in the present study, descriptive statistics, correlation statistics and multiple regression statistics have been used. The uses of all these tools at different places have been made in the light of requirement of analysis.

3.5. Hypothesis Taken

Since the objective of this study is to compare the growth of the banks in private and public sector, the study makes the following hypothesis:

Hypothesis 1

H_0: There are significant differences subsist in growth performance between SBI and HDFC bank over the period under study.

H_1: There are no significant differences subsist in growth performance between SBI and HDFC bank over the period under study.

4. Empirical Results and Analysis

4.1. Descriptive Statistics

Descriptive statistics shows that mean value of HDFC bank in terms of growth performance indicators are more satisfactory than SBI under the study which indicates that growth performance of HDFC bank is very pleasing than SBI in India during the period under study. To make the analysis and interpretation more precise and accurate, the values of S.D., C.V., maximum, minimum, Skewness and Kurtosis have been computed from the ratios. In the case of management of growth performance in the area of Reserve, Advance, Investment, Equity Dividend, Net Profit and EPS, C.V. of HDFC bank is better than SBI because lower variability is seen in case of HDFC bank. Again in the area of Interest Earned and Operating Expenses lower variability is seen in case of SBI. This is an indication of satisfactory management of growth performance. All the variables of both the banks show positive and negative skewness and the kurtosis which indicates that all the selected variables are less peaked than normal distribution. For a normal distribution kurtosis generally equals to 3. Median, Skewness, Kurtosis, authenticates that none of the variables are normally distributed, which is shown in tables 1 & 2.

Table 1. *Descriptive Statistics on Various growth performance indicator of SBI.*

	RES	ADV	INV	IE	OE	ED	NP	EPS
Mean	.1522	.1611	.1078	.1467	.1178	.1067	.0878	-.7778
Median	.1500	.1600	.1100	.1200	.1100	.1200	.1700	.0300
Maximum	.36	.23	.31	.24	.27	.46	.37	.33
Minimum	.00	.07	-.09	.09	-.08	-.27	-.30	-7.31
Std. Dev.	.10183	.04910	.11966	.05766	.09615	.20310	.23726	2.46103
C.V. (%)	66.91	30.48	111.00	39.30	81.62	190.35	270.23	-316.41
Skewness	.720	-.338	.118	.895	-.664	-.149	-.620	-2.947
Kurtosis	1.961	.289	-.041	-1.013	2.048	1.194	-.769	8.761
Observations	9	9	9	9	9	9	9	9

Source: Author's own calculation with the help of spss

Table 2. *Descriptive Statistics on Various performance indicator of HDFC Bank.*

	RES	ADV	INV	IE	OE	ED	NP	EPS
Mean	.2356	.2256	.1700	.2244	.1722	.2378	.2167	-.1656
Median	.1800	.2100	.1600	.2200	.1600	.2300	.2300	.1800
Maximum	.45	.36	.38	.38	.46	.29	.29	.24
Minimum	.15	.17	.00	.00	-.08	.18	.13	-2.83
Std. Dev.	.10163	.05897	.11874	.12167	.16037	.03528	.04770	1.00088
C.V. (%)	43.14	26.14	69.85	54.22	93.13	14.84	22.01	-604.40
Skewness	1.355	1.656	.437	-.628	.385	-.072	-.463	-2.981
Kurtosis	1.274	3.109	-.330	.325	.309	-.411	.213	8.912
Observations	9	9	9	9	9	9	9	9

Source: Author's own calculation with the help of spss

4.2. Correlation Statistics

Generally, correlation analysis attempts to determine the degree and direction of relationship between two variables under study. In a bivariate distribution, if the variables have the cause and effect relationship, they have high degree of correlation between them. The co-efficient of correlation is denoted by "r". The correlation is studied using Karl Pearson's correlation formula.

$$r = \frac{N \Sigma xy - (\Sigma x)(\Sigma y)}{\sqrt{(N \Sigma x2 - (\Sigma x)2)(N \Sigma y2 - (\Sigma y)2)}}$$ (Karl Pearson's correlation formula)

Spearman's correlation analysis is used to see the relationship between financial performance and profitability. If efficient financial performance increases profitability, one should expect a negative relationship between the measures of working capital management and profitability variable. Table 3 & 4 demonstrates result of correlation coefficients and t-values are listed accordingly.

Table 3. *Correlation Statistics on Various performance indicator of SBI.*

	RES	ADV	INV	IE	OE	ED	NP	EPS
RES	1.000							
ADV	.237	1.000						
INV	.341	.003	1.000					
IE	.542	.235	.511	1.000				
OE	.331	.056	.173	.050	1.000			
ED	.606*	.262	.486	.582	-.075	1.000		
NP	.633*	.111	.396	.624*	.170	.871**	1.000	
EPS	.314	.715*	-.260	.296	.164	.056	-.036	1.000

Source: Author's own calculation with the help of spss
**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Table 4. *Correlation Statistics on Various performance indicator of HDFC Bank.*

	RES	ADV	INV	IE	OE	ED	NP	EPS
RES	1.000							
ADV	.163	1.000						
INV	.439	-.014	1.000					
IE	-.094	.608	.431	1.000				
OE	.341	.666	.377	.680*	1.000			
ED	-.031	.668*	.131	.492	.317	1.000		
NP	-.630	.283	-.497	-.040	-.022	.463	1.000	
EPS	.266	.271	-.356	-.159	-.030	-.025	-.145	1.000

Source: Author's own calculation with the help of spss
*. Correlation is significant at the 0.05 level (2-tailed).

Correlation statistics in tables 3 identify that Reserve, Advance, Interest Earned, Operating Expenses and Equity Dividend are positively correlated with EPS and Investment as well as Net Profit are negatively related with EPS in case of SBI during the period under study. Whereas Correlation statistics in tables 4 identify that all the variable except Reserve and Advance are negatively correlated with EPS in case of HDFC bank during the period under study. Correlation test result is unbelievably powerful in case of SBI than HDFC bank. However it does not talk about the grounds and shock.

In order to make out an unequivocal delineation of the shock, it is obligatory to execute multiple regression tests between the selected variables.

4.3. Multiple Regression Statistics

Most sophisticated multiple regression techniques have been applied to study the joint influence of all the selected ratios indicating growth performance and performance on the EPS and the regression coefficients have been tested with the help of the most popular 't' test. With the intention of observe the association between the dependent variable EPS growth (EPS) and seven independent variables of Reserve and Surplus growth (RES), Advance growth (ADV), Investment growth (INV), Interest Earned growth (IE), Operating Expenses growth (OE), Equity Dividend growth (ED), Net profit growth (NP) have been used to measure the performance of SBI and HDFC bank

The regression model used in this analysis is:

EPS = £ + ß1RES + ß2 ADV + ß3 INV + ß4 IE + ß5 OE + ß6 ED + ß7 NP + εt(unexplained variables or error terms)

Where £, ß1, ß2, ß3, ß4, ß5, ß6, ß7 are the parameters of the EPS line.

With the aim of determine the reliability of the regression results, Durbin-Watson statistics has been used. The rule of thumb is that the observed D-W statistic should be between 1 and 4 for the dependability of the regression results and the absence of serial correlation. In order to examine the multicollinearity between the independent variables, variance inflation factor (VIF) has been used. According to modern statistics if the VIF of a variable does not exceed 5, it may be said that there are no multicollinearity problem with other independent variables.

First of all, seven independent variables of Reserve and Surplus growth (RES), Advance growth (ADV), Investment growth (INV), Interest Earned growth (IE), Operating Expenses growth (OE), Equity Dividend growth (ED), Net profit growth (NP) and EPS growth (EPS) has been used as dependent variable. Using these seven independent variables as the determinants of EPS it has found that seven variables are correlated with each other.

4.3.1. SBI

It is also observed that insignificant association is found with a very high standard error for all the runs of the regression model. In order to reduce the multicollinearity problem and to obtain reliable results, next step of regressions under enter method with seven variables linear regression analyses run on the SPSS are performed.

Table 5. *Multiple Regression Test Results of SBI.*

Model		Unstandardized Coefficients		t	Sig.	Collinearity Statistics	
1		B	Std. Error			Tolerance	VIF
	(Constant)	-8.153	3.715	-2.195	.159		
	RES	5.482	12.802	.428	.710	.443	2.255
	ADV	31.771	18.903	1.681	.235	.875	1.143
	INV	-8.791	9.286	-.947	.444	.610	1.639
	IE	16.639	20.766	.801	.507	.526	1.903
	OE	2.262	10.701	.211	.852	.712	1.405
	ED	-3.156	6.637	-.476	.681	.415	2.412
R=0.867[a]		RSquare= 0.751	Adjusted R Square= 0.005		F Change=1.006	Durbin-Watson=1.483	

Source: Author's own calculation with the help of spss

a. Predictors: (Constant), ADV, OE, INV, RES, IE, ED

b. Dependent Variable: EPS

c. Variable excluded: NP

It is observed from the table 5 that after removing NP, one unit increase in RES, IE and OE, EPS of the bank increased by 5.482 units, 16.639 units and 2.262 units respectively. However, when INV and ED increased by 1 unit, EPS of the bank decreased by 8.791 units and 3.156 units respectively. Again for one unit increase in ADV, the EPS of the bank increased by 31.771 units in the same way. It is evident from the table that ADV and IE have exceptionally high positive impact on EPS whereas INV has extremely high negative impact on EPS.

The multiple correlation coefficients (R) between the EPS and the independent variables taken together is 0.867. It may be said that EPS was significantly influenced by its independent variables. R^2 defines to what extent the variation in the response is explained by the regression. From the table it is observed that the value of R^2 is 0.751, which means 75% of the variation is explained by the regression. Adjusted R^2 0.005 indicates the co-efficient of determination which is positively associated in the regression equation. The value of F Change is 1.006, which examines the significance of all the variables collectively in regression function. The observed R^2 and F statistics may thus be sufficient to draw an inference in the favour of goodness of the regression model to fit into the present task of identifying the factors influencing the EPS of the banks during the study period. Durbin-Watson static informs us whether the assumption of independent errors is tenable. The closer to 2 the value is the better and for the data it was 1.483. VIF measures the multicollinearity problem, which is the inverse of tolerance value. Based on the value of VIF in tables, there is very low multicollinearity among the variables because VIF is less than 5.

4.3.2. HDFC Bank

It is also observed that insignificant association is found

with a very high standard error for all the runs of the regression model. In order to reduce the multicollinearity problem and to obtain reliable results, next step of regressions under enter method with eight variables linear regression analyses run on the SPSS are performed.

Table 6. *Multiple Regression Test Results of HDFC Bank.*

Model		Unstandardized Coefficients		t	Sig.	Collinearity Statistics	
1		B	Std. Error			Tolerance	VIF
	(Constant)	-.975	4.026	-.242	.831		
	RES	5.736	8.814	.651	.582	.347	2.881
	ADV	7.912	21.630	.366	.750	.171	5.842
	INV	-4.349	8.352	-.521	.655	.283	3.532
	IE	2.045	9.768	.209	.854	.199	5.001
	OE	-2.745	6.083	-.451	.696	.293	3.417
	ED	-6.614	23.321	-.284	.803	.411	2.430
R=0.666[a]		RSquare=0. 444	Adjusted R Square= -1.224		F change=0.266	Durbin-Watson=3.224	

Source: Author's own calculation with the help of spss
a. Predictors: (Constant), ADV, OE, INV, RES, IE, ED
b. Dependent Variable: EPS
c. Variable excluded: NP

It is observed from the table 6 that after removing NP, one unit increase in RES, ADV and IE, EPS of the bank increased by 5.736 units, 7.912 units and 2.045 units respectively. However, when INV, OE and ED increased by 1 unit, EPS of the bank decreased by 4.349 units, 2.745 units and 6.614 units correspondingly. It is evident from the table that RES and INV have remarkably high positive impact on EPS whereas; ED and RES have amazingly high negative impact on EPS.

The multiple correlation coefficients (R) between the EPS and the independent variables taken together is 0.666. It may be said that EPS was significantly influenced by its independent variables. R^2 defines to what extent the variation in the response is explained by the regression. From the table it is observed that the value of R^2 is 0.444, which means approxly 45% of the variation is explained by the regression. Adjusted R^2 -1.224 indicates the co-efficient of determination which is negatively associated in the regression equation. The value of F change is 0.266, which examines the significance of all the variables collectively in regression function. The observed R^2 and F statistics may thus be sufficient to draw an inference in the favour of goodness of the regression model to fit into the present task of identifying the factors influencing the EPS of the banks during the study period. Durbin-Watson static informs us whether the assumption of independent errors is tenable. The closer to 2 the value is the better and for the data it was 3.224. VIF measures the multicollinearity problem, which is the inverse of tolerance value. Based on the value of VIF in tables, there is very low multicollinearity among variables except ADV and IE because VIF is higher than 5.

4.3.3. Test of Hypotheses

A hypothesis is a supposition to be tested. The statistical testing of hypothesis is the significant method in statistical inference. Hypothesis tests are far and wide used in business and industry for making decisions. The following are the hypothesis framed and tested using test of significance at 5% level of significance.

Table 7. *T- test Results*

Test Value = 0					95% Confidence Interval of the Difference	
	t	df	Sig. (2-tailed)	Mean Difference	Lower	Upper
SBI	-.948	8	.371	-.77778	-2.6695	1.1139
HDFC Bank	-.496	8	.633	-.16556	-.9349	.6038

Source: Author's own calculation with the help of spss
The calculated value of t is less than the significant value, hence null hypotheses is accepted.

5. Conclusions

The present study investigates and compares the growth performance of SBI and HDFC bank for the period from 2005-06 to2014-15 using descriptive statistics, correlation statistics and multiple regression statistics. The empirical results of descriptive statistics illustrate that the growth performance of HDFC bank is very satisfying than SBI in India during the period under study which indicates that growth performance is very pleasing in case of private sector bank than public sector bank in India during the period under study. In the case of management of growth performance in the area of Reserve, Advance, Investment, Equity Dividend, Net Profit and EPS, C.V. of HDFC bank is better than SBI because lower variability is seen in case of HDFC bank. Again in the area of Interest Earned and Operating Expenses lower variability is seen in case of SBI. This is an indication of satisfactory management of performance. Correlation test result is unbelievably powerful in case of SBI than HDFC bank. However it does not talk about the grounds and shock.

This study is not free from certain limitations. We have considered only 10 years period for the study and based on only seven performance indicators. We could not consider the growth of sales, expansion of the business, risk of the business, deposits mobilization, net interest margin, non-interest income in the present study. This will be my future research work.

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