

An Analysis of Financial Performance of Selected Public Sector Banks before Merger Using Camel Model

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Abstract— Banking sector in India has a strong financial market capitalization and it is considered as one of the world's fastest growing sector which supports many small, medium and large scale businesses continuously towards the economic growth of our nation. Mergers and acquisitions in public sector banks have stirred the progress of the banking sector. Mergers and Acquisitions will lead to rationalization of resources, improve productivity, customer service and lower cost of lending funds. The present paper analyzes the performance of three financial institutions that are Bank of Baroda, Dena Bank and vijaya Bank now these three banks are merged together as per the announcement of government which has formed as the third largest bank in India. The findings of this paper reveal that to some extent mergers and acquisitions have been successful in Indian banking sector. For this purpose, the secondary data are collected from annual reports of the three banks for a period of ten years from 2009 -2018 using CAMEL model. The research aims to evaluate financial analysis of these banks through capital adequacy, asset quality, management efficiency, earnings and liquidity.

Keywords— Indian banking sector, CAMEL Model; Bank of Baroda (BOB); Vijaya Bank (VB); Dena Bank (DB); Mergers and Acquisitions (M&A's).

I. INTRODUCTION

Today's banking sector is facing various challenges in the e-commerce world despite its playing a major role by providing variety of services and has also become an integral part for various economic activities. The financial condition of a country depends on the soundness of its banking industry. Evaluation of the performance of banks helps to know how they are successful in their diverse areas of improvement. Due to global crisis banking sectors in India are facing complex problems. Mergers and acquisitions basically promote synergies that will create more value than individual banks operating in competition. The present paper discusses the evaluation of financial performance of Bank of Baroda, Dena Bank and Vijaya Bank by analyzing the financial ratios using CAMEL model through capital adequacy, asset quality, management efficiency, earnings and liquidity.

Mergers and Acquisitions of Selected Public Sector Banks

Mergers and acquisitions(M&As) are stepped up as a gate way for entry into new markets, in larger size, faster growth in the market share, asset growth, and the attempt to become more competitive in market place and survival in a long run. Merger is a combination of two or more companies to form one new entity. Owners of separate, roughly, same type of firms pool their interests in to a single firm. Acquisition is that one company buys another one and manages with the acquirer's needs. Mergers & Acquisitions (M&A) are the strategic growth devices with in the hands of more and more companies not only to remain within the competition but also to increase their margins, market share and dominance globally. Banking in the present day is in a challenging position; to meet up the various consumer's needs and

preference such expectations are met through Mergers and acquisitions.

The major banking reforms for the merger of banks were undertaken during the period of 1991 by Narashimham committee, when the former governor Mr M. Narasimham reserve bank of india had recommended the idea in favor of consolidation of banks to attain global standards and suggested that such mergers would not be imposed by the government and the process should be voluntary.

PJ Nyak Committee 2014 had also recommended for merger and suggested that the government should merge the banks or privatize state owned banks.

The Indian Government announced the merger of Bank of Baroda, vijaya Bank and Dena Bank on 17th September 2018 as it is the first ever three way consolidation with a combined business of ₹ 14.82 lakh crore to create the country's third largest lender after state bank of India (SBI) and ICICI Bank. Bank of Baroda is the biggest of the three with ₹ 10.29 lakh crore, Vijaya Bank with ₹ 2.79 lakh crore and Dena Bank with ₹1.72 lakh crore. The strategy which the govt has adopted is merging one weak bank with its stronger counterparts. In this M&A's the weaker bank is Mumbai based Dena bank. Dena Bank is restrained from lending any further as it is under PCA (Prompt Corrective Action) and the other two banks have the strength to include a weaker bank. Dena Bank features a gross NPA ratio of twenty-two, among the very best across the industry. While Bank of Baroda, the most important of the three, features a bad loan ratio of 12.4% and Vijaya Bank, on the contrary, is among the higher performing public sector banks with a gross NPA ratio of 6.9%.One of the most reasons for merging the banks is to tackle the difficulty of rising bad loans. Bad loans refer to loans where corporate borrowers aren't re-paying their dues to banks. Also, this merger is predicted to cater to the difficulty

of reducing demand of fresh loans with in the economy. As per the share exchange ratio approved in reference to the merger, the Bank of Baroda will issue 110 shares of Rs 2 each for each 1000 shares of Dena Bank and 402 shares of Rs 2 each for each 1000 shares of Vijaya Bank. Dena bank and Vijaya Bank were merged with Bank of Baroda on 1st April 2019.

Profile of Selected Public Sector Banks

Bank of Baroda is the third largest bank in India and it is a public sector bank ranked 1145 on Forbes global. The government of India nationalized the bank on 19th July 1969. In 1908 Maharaja Sayajirao Gaekward III set up the bank of Baroda in the princely state of Baroda, Gujarat. It includes a network of 9583 branches, 56361 employees and 10442 ATM's. It offers a wide range to financial services to its customers.

Vijaya Bank is a public sector bank formed by group of enterprising farmers lead by Mr.A.B.Shetty established on 23rd October 1931 in Mangalore Karnataka. Vijaya Bank is a nationalized bank as on 2018 and it had a network of 2136 branches, 16079 employees and 2155 ATM's.

Dena Bank is a public sector bank formed by the family Devakaran Nanjee and was incorporated as a public company in 1939. Dena Bank was later nationalized on July 1969 as on 2018 it had 1872 branches, 13613 employees, 1538 ATM's.

Camel Model

CAMEL model is a recognized rating system basically ratio based model for evaluating the banks overall performance that are assessed to five components C-Capital adequacy, A-Asset quality, M-Management, E-Earnings and L-Liquidity. It is a supervisory rating system developed and adopted by the U.S Federal Reserve in 1979. The system was adopted in India in 1995 at the recommendation of Mr. Padmanabhan the then governor of Reserve Bank of India. It is an effective internal supervisory tool that helps to assess the financial position of each bank in improving further development and actions that have to be taken.

Objective of the Study

The following is the main objective of the present paper:

1. To analyze the financial performance of BOB, Dena Bank and Vijaya Bank before Merger.

II. REVIEW OF LITERATURE

Ruchi Guptha (2014), evaluated the performance of public sector banks in India using CAMEL approach. It was concluded that there is a statistically difference between the camel ratio of all public sector Banks in India, thus the overall performance is different and the banks with least ranking has to be improved.

Srinivasan and Yuva Priya Saminathan (2016), conducted a study to analyze financial performance of commercial banks in India. They found that public sector banks ranked at the top five during their study period were Andhra Bank, Bank Of Baroda, Allahabad Bank, Punjab National Bank, IDBI Bank,

State Bank of Bikaner and Jaipur and UCO Bank. The private Banks Ranked top five were Tamilnadu Merchantaile Bank, Kotak Mahindra Bank, HDFC Bank, Axis Bank & Karur Vysya Bank. The foreign banks ranked top five were bank of Bahrain Kuwait, HSBC Bank, CTBS Bank, Citi Bank & DBS and the suggestions given by them were that the banks with least banking need to improve their performance to come up to the desired standards.

Nadhi, Tanwar. (2017), studied the performance analysis and impact of mergers and acquisitions on the financial and operating performance of selected Indian banks using camel model. It was concluded that to some extent mergers and acquisitions have been successful in Indian banking sector and proven as a best tool in achieving corporate diversity and growth.

Sonia Singh and Subhankar Das (2018), studied the Post merger Financial Performance of selected Indian Private and Public Sector Banks. The Researcher evaluated current ratio, Activity ratio, Asset turnover ratio, Profitability, Net Profit margin, Return on capital employed and concluded that BOB and PNB had no improvement in mean CR, SBI's acquiring process increased and the efficiency in Asset turnover Ratio for the longer period is not the same as that of shorter period.

Ishwarya (2019), has studied the Performance of the State Bank of India in the Pre and Post Mergers and Acquisitions, trends and reforms in Indian Banking sector. The findings suggested that in Indian banking so far there have been restrictions in restructuring weak and distressed banks, stated that Indian financial system needs a very large bank to meet the risks, compete global market and concluded that policy makers and government should be cautions during promoting merger.

III. RESEARCH METHODOLOGY

It is an analytical research design and the study is based on the secondary data. The secondary data sources were collected from respective banks balance sheets, profit and loss statement, ratio analysis and interpretations from journals, bank annual reports and websites. The period of study is 10 years from 2009-2018.

IV. RESULTS AND DISCUSSION

Capital Adequacy (C)

Capital Adequacy: Reflects the confidence of the depositors about the bank and regulates preventing the bank from going bankrupt. The higher the CRAR is better the Basel committee has recommended maintaining a minimum of nine percent. It gives an overall financial status of banks and their ability to meet additional capital requirements. The following ratios measure the capital adequacy

*CRAR - Capital to Risk weighted Assets Ratio

*DER - DEBT to Equity Ratio

*TATAR – Total Advance to Total Asset Ratio

*GSTI – Government Securities to Total Investment Ratio

TABLE 1. Analysis of Capital Adequacy of Bank of Baroda, Dena Bank and Vijaya Bank during 2009-2018

YEAR	BANK OF BARODA				DENA BANK				VIJAYA BANK			
	CRAR	DER	TATAR	GSIT	CRAR	DER	TATAR	GSIT	CRAR	DER	TATA	GSIT
2009	0.14	0.44	0.63	0.77	0.12	0.03	0.60	0.80	0.11	0.22	0.57	0.82
2010	0.14	0.88	0.63	0.81	0.13	0.65	0.62	0.85	0.13	0.61	0.59	0.85
2011	0.15	1.06	0.64	0.83	0.13	0.49	0.63	0.81	0.14	0.45	0.60	0.73
2012	0.15	0.86	0.64	0.83	0.12	0.90	0.65	0.84	0.12	1.09	0.61	0.83
2013	0.13	0.83	0.60	0.84	0.11	1.46	0.58	0.78	0.11	1.21	0.63	0.83
2014	0.12	1.02	0.60	0.83	0.11	0.72	0.62	0.79	0.13	0.84	0.59	0.08
2015	0.13	0.89	0.60	0.81	0.11	0.46	0.61	0.78	0.11	1.23	0.61	0.08
2016	0.13	0.83	0.57	0.86	0.11	0.88	0.62	0.85	0.11	1.58	0.62	0.08
2017	0.13	0.76	0.55	0.88	0.11	0.73	0.56	0.87	0.12	1.51	0.61	0.09
2018	0.12	1.44	0.59	0.88	0.11	0.39	0.54	0.79	0.13	0.74	0.66	0.09
Mean	0.13	0.90	0.61	0.83	0.12	0.67	0.60	0.82	0.12	0.95	0.61	0.45
SD	0.01	0.25	0.03	0.03	0.01	0.38	0.03	0.03	0.01	0.45	0.02	0.38
CV	8.02	28.11	4.93	4.11	7.31	56.57	5.53	4.10	8.46	47.52	3.80	85.98
CAGR	-0.02	0.14	-0.01	0.02	-0.01	0.35	-0.01	0.00	0.02	0.14	0.02	-0.22

Source: Annual Reports of Bank of Baroda, Dena Bank and Vijaya Bank (2009-2018)

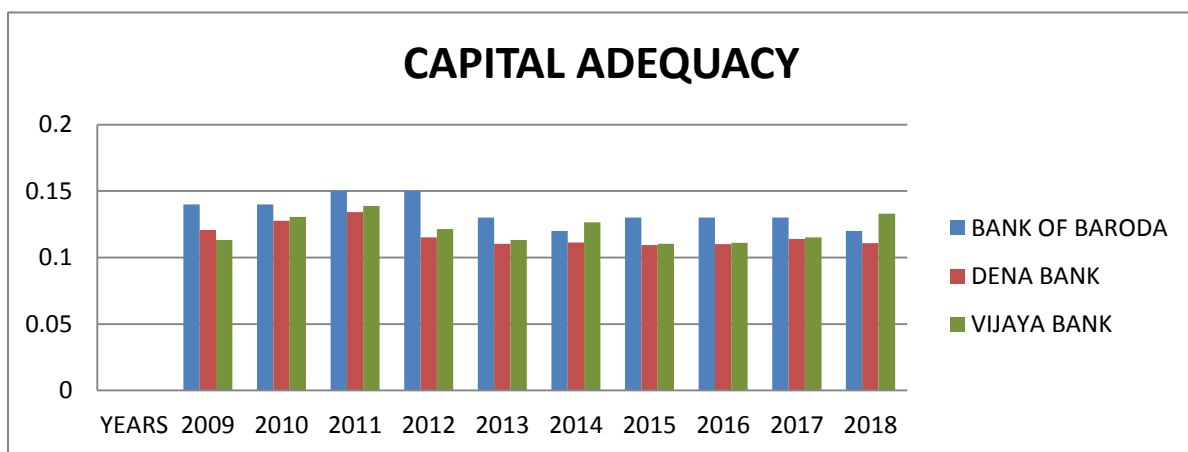


Fig. 1. Analysis of Capital Adequacy of Bank of Baroda, Dena Bank and Vijaya Bank during 2009-2018

It is observed from figure 1, that when it is compared to Dena Bank and Vijaya Bank, the Capital Adequacy of Bank of Baroda is good during the study period before merger.

Table – 1 Presents Camel running of Capital ratios of Three Banks of Baroda (BOB), DENA BANK (DB), Vijaya Bank (VB) from 2009-2018.

It is observed from table 1 that the financial performance analysis on CAMEL Model in the BOB is presented with CRAR year wise range from 0.12 to 0.15, DER year wise range from 0.44 to 1.44, TATAR year wise range from 0.55 to 0.64 and GSTI year wise range from 0.77 to 0.88. It is found for DB with CRAR year wise range from 0.11 to 0.13, DER year wise range from 0.03 to 1.46, TATAR year wise range from 0.54 to 0.65 and GSTI year wise range from 0.78 to 0.87. Then VB has that analysis with CRAR year wise range from 0.11 to 0.14, DER year wise range from 0.22 to 1.58, TATAR year wise range from 0.57 to 0.66 and GSTI year wise range from 0.09 to 0.85. These are Capital Adequacy result between BOB, Dena Bank and Vijaya Bank on CAMEL Model.

It is known that CRAR values of BOB Mean is 0.13, the mean of Dena Bank is 0.12, Vijaya bank Mean is 0.12. So BOB has better value Mean which is 0.13, the standard deviation (SD) values of BOB is 0.01, Dena Bank is 0.01 and

Vijaya Bank is 0.1. The coefficient of variation (CV) value of BOB is 8.02, Dena Bank Value is 7.31 and Vijaya Bank value is 8.46 and the compound average growth rate (CAGR) value of BOB is -0.02, Dena Bank is -0.01 and Vijaya Bank is 0.02. DER values of BOB Mean is 0.90, Dena Bank is 0.67, Vijaya Bank Mean is 0.95 and Vijaya Bank has better value Mean that is 0.95, standard deviation (SD) values of BOB is 0.25, Dena Bank is 0.38 and Vijaya Bank is 0.45, coefficient of variation (CV) value of BOB is 28.11, Dena Bank Value is 56.57 and Vijaya bank value is 47.52, and compound average growth rate (CAGR) value of BOB is 0.14, Dena Bank is 0.35 and Vijaya Bank is 0.14. TATAR values of BOB Mean is 0.61, Dena Bank is 0.60, Vijaya Bank Mean is 0.61 and BOB & Vijaya Bank both is better value Mean is 0.61, standard deviation (SD) values of BOB is 0.03, Dena Bank is 0.03 and Vijaya Bank is 0.02, coefficient of variation (CV) value of BOB is 4.93, Dena Bank Value is 5.53 and Vijaya bank value is 3.80, and compound average growth rate (CAGR) value of BOB is -0.01, Dena Bank is -0.01 and Vijaya Bank is 0.02. GSTI values of BOB Mean is 0.83, Dena Bank is 0.82, Vijaya Bank Mean is 0.45 and BOB is better value Mean is 0.83, standard deviation (SD) values of BOB is 0.03, Dena Bank is 0.003 and Vijaya Bank is 0.38, coefficient of variation (CV)

value of BOB is 4.11, Dena Bank Value is 4.10 and Vijaya bank value is 85.98, and compound average growth rate (CAGR) value of BOB is 0.02, Dena Bank is 0.00 and Vijaya Bank is -0.22. Therefore, compared to Dena Bank and Vijaya Bank the Capital Adequacy of Bank of Baroda is good during the study period before merger.

Asset Quality (A)

Asset Quality: The quality of asset is an important factor to measure the financial strength. The asset quality is measured

in order to ascertain the non-performing assets as a percentage of the total assets, recoveries, sufficiency of provisions etc. This helps the banks locate the types of advances that have to be made in order to create interest income for the institutions. The following ratios measure the asset quality
*GNPAR – Gross NPA to Net Advances Ratio
*NNPAR – Net NPA to Net Advance Ratio
* Total Investment to Total Asset Ratio

TABLE 2. Analysis of Asset Quality of Bank of Baroda, Dena Bank and Vijaya Bank during 2009-2018

YEAR	BANK OF BARODA		DENA BANK		VIJAYA BANK	
	GNPAR	NNPAR	GNPAR	NNPAR	GNPAR	NNPAR
2009	0.0128	0.0031	0.0213	0.0107	0.0310	0.0153
2010	0.0137	0.0034	0.0180	0.0120	0.0255	0.0122
2011	0.0138	0.0035	0.0186	0.0122	0.0258	0.0152
2012	0.0155	0.0054	0.0167	0.0100	0.0297	0.0172
2013	0.0243	0.0128	0.0218	0.0138	0.0220	0.0130
2014	0.0299	0.0152	0.0333	0.0231	0.0244	0.0155
2015	0.0380	0.0189	0.0545	0.0374	0.0282	0.0191
2016	0.1056	0.0496	0.0998	0.0610	0.0677	0.0481
2017	0.1115	0.0472	0.1627	0.0998	0.0258	0.0176
2018	0.1321	0.0549	0.2204	0.1056	0.0648	0.0432
Mean	0.05	0.02	0.07	0.04	0.03	0.02
SD	0.05	0.02	0.07	0.04	0.02	0.01
CV	94.85	97.80	107.70	97.01	49.18	59.42
CAGR	0.30	0.38	0.30	0.29	0.09	0.12

Source: Annual Reports of Bank of Baroda, Dena Bank and Vijaya Bank (2009-2018)

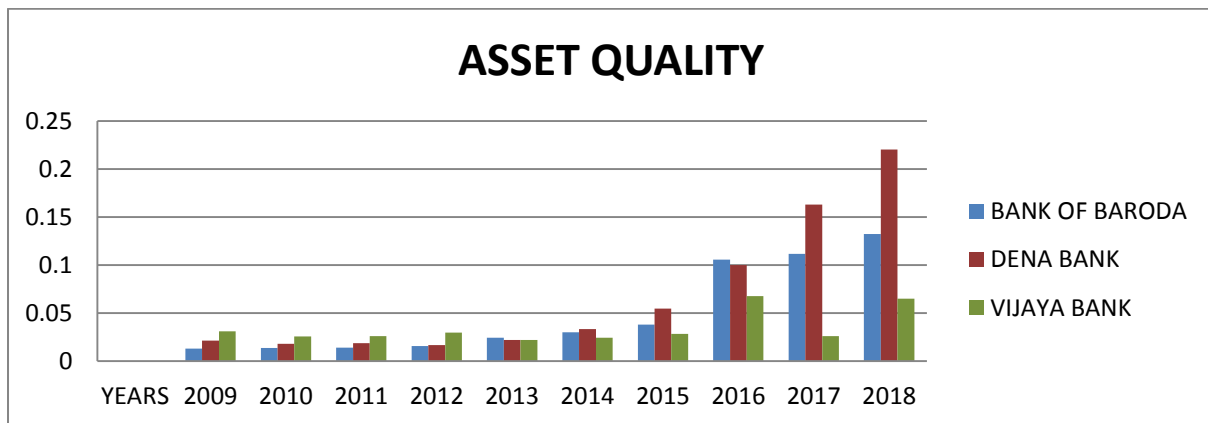


Fig. 2. Analysis of Asset Quality of Bank of Baroda, Dena Bank and Vijaya Bank during 2009-2018

It is observed from figure 2 that when it is compared to Bank of Baroda and Vijaya bank the asset quality of Dena Bank is good during the study period before merger.

Table – 2 Presents Camel running of asset ratios of three Banks, Banks of Baroda (BOB), DENA BANK (D.B) and Vijaya Bank (V.B) from 2009-2018.

It is observed from table 2 , that the financial performance analysis on CAMEL Model in the BOB GNPAR year wise range from 0.01 to 0.11, NNPAR year wise range from 0.003 to 0.05. They comparing for DB GNPAR year wise range from 0.01 to 0.22, NNPAR year wise range from 0.01 to 0.10. Then Comparing VB GNPAR year wise range from 0.0 to 0.06, NNPAR year wise range from 0.01 to 0.05. These are

asset quality results between BOB, Dena Bank and Vijaya Bank on CAMEL Model.

It is known that GNPAR values of BOB Mean is 0.05, Dena Bank is 0.07, Vijaya bank Mean is 0.03 and Dena Bank is better value Mean is 0.07, standard deviation (SD) values of BOB is 0.05, Dena Bank is 0.07 and Vijaya Bank is 0.02, coefficient of variation (CV) value of BOB is 94.85, Dena Bank Value is 107.70 and Vijaya Bank value is 49.18, and compound average growth rate (CAGR) value of BOB is 0.30, Dena Bank is 0.30 and Vijaya Bank is 0.09. NNPAR values of BOB Mean is 0.02, Dena Bank is 0.04, Vijaya Bank Mean is 0.02 and Dena Bank is better value Mean is 0.04, standard deviation (SD) values of BOB is 0.02, Dena Bank is

0.04 and Vijaya Bank is 0.01, coefficient of variation (CV) value of BOB is 97.80, Dena Bank Value is 97.01 and Vijaya bank value is 59.42, and compound average growth rate (CAGR) value of BOB is 0.38, Dena Bank is 0.29 and Vijaya Bank is 0.12. Therefore when the analysis is compared to Bank of Baroda, Vijaya bank the asset quality of Dena Bank is good during the study period before merger.

Management Efficiency (M)

Management Efficiency observes, set norms, ability of planning and responses to changing environment, leadership, measure the efficiency and effectiveness of the bank. The management takes decisions depending on its risk perception. The following ratios are used to measure the management efficiency

- *TATDR – Total Advances to Total Deposit Ratio
- *BPE – Business per Employee
- *PPE – Profit per Employee

TABLE 3. Analysis of Management Efficiency of Bank of Baroda, Dena Bank and Vijaya Bank during 2009-2018

YEAR	BANK OF BARODA			DENA BANK			VIJAYA BANK		
	TATDR	BPE	PPE	TATDR	BPE	PPE	TATDR	BPE	PPE
2009	0.7484	0.4993	0.2476	0.6779	5.2979	0.0058	0.6504	7.8194	0.0029
2010	0.7262	0.5306	0.2408	0.6957	5.5395	0.0059	0.6704	6.5249	0.0049
2011	0.7487	0.6551	0.2099	0.7034	5.0819	0.0056	0.6651	5.9685	0.0043
2012	0.7467	0.8201	0.2776	0.7407	5.6218	0.0060	0.6972	7.1519	0.0041
2013	0.6925	0.9500	0.3272	0.6837	6.5030	0.0050	0.7191	7.2976	0.0035
2014	0.6979	0.9435	0.0047	0.7146	7.6489	0.0029	0.6557	7.1128	0.0116
2015	0.6932	0.9592	0.0033	0.6955	8.0341	0.0014	0.6862	8.4068	0.0092
2016	0.6685	0.9431	-0.0056	0.7307	7.9099	-0.0047	0.7094	8.7887	0.0067
2017	0.6370	0.9340	0.0014	0.6805	8.5725	-0.0046	0.7108	9.6672	0.0087
2018	0.7228	0.9146	-0.0024	0.6995	8.0037	-0.0112	0.7386	8.3440	0.0064
MEAN	0.71	0.81	0.13	0.70	6.82	0.00	0.69	7.71	0.01
SD	0.04	0.18	0.14	0.02	1.35	0.01	0.03	1.11	0.00
CV	5.26	22.48	107.63	2.98	19.75	498.26	4.27	14.45	45.60
CAGR	0.00	0.07	-1.60	0.00	0.05	-2.07	0.01	0.01	0.09

Source: Annual Reports of Bank of Baroda, Dena Bank and Vijaya Bank (2009-2018)

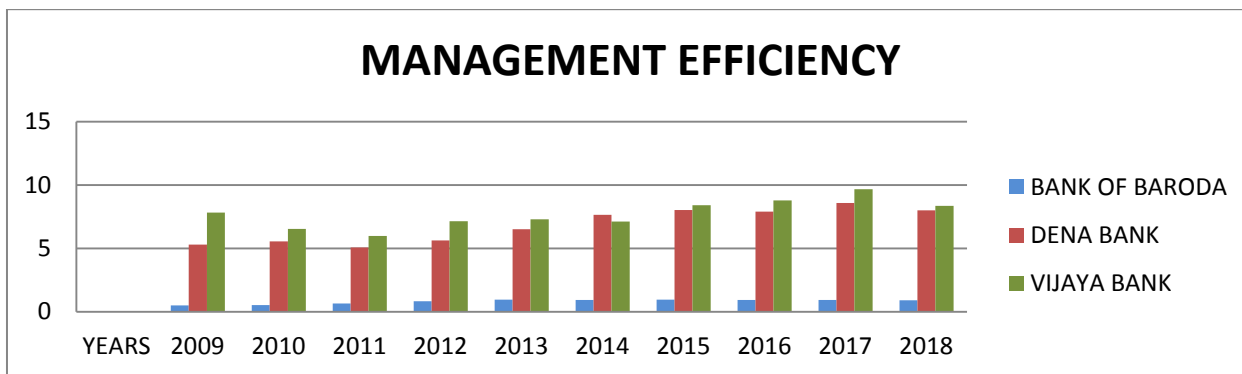


Fig. 3. Analysis of Management Efficiency of Bank of Baroda, Dena Bank and Vijaya Bank during 2009-2018

It is observed from figure 3 that the management efficiency of vijaya bank is better when it is compared to Bank of Baroda and Dena bank during the study period.

Table – 3 Presents Camel running of Management Efficiency ratios of three Banks, Bank of Baroda (BOB), DENA BANK (D.B), Vijaya Bank (V.B) from 2009-2018.

It is observed from table 3, that the financial performance analysis on CAMEL Model in the BOB TATDR year wise range from 0.63 to 0.74, BPE year wise range from 0.49 to 0.95, PPE year wise range from -0.01 to -0.32. They comparing for DB TATDR year wise range from 0.67 to 0.74, BPE year wise range from 5.08 to 8.57, PPE year wise range from -0.01 to -0.005. Then Comparing VB TATDR year wise range from 0.65 to 0.73, BPE year wise range from 5.96 to

9.60, PPE year wise range from 0.002 to 0.01. There are Management efficiency result between BOB, Dena Bank and Vijaya Bank on CAMEL Model.

It is known that TATDR values of BOB Mean is 0.71, Dena Bank is 0.70, Vijaya bank Mean is 0.69 and BOB is better value Mean is 0.71, standard deviation (SD) values of BOB is 0.04, Dena Bank is 0.02 and Vijaya Bank is 0.03, coefficient of variation (CV) value of BOB is 5.26, Dena Bank Value is 2.98 and Vijaya Bank value is 4.27, and compound average growth rate (CAGR) value of BOB is 0.00, Dena Bank is 0.00 and Vijaya Bank is 0.01. BPE values of BOB Mean is 0.81, Dena Bank is 6.82, Vijaya Bank Mean is 7.71 and Vijaya Bank is better value Mean is 7.71, standard deviation (SD) values of BOB is 0.18, Dena Bank is 1.35 and

Vijaya Bank is 1.11, coefficient of variation (CV) value of BOB is 22.48, Dena Bank Value is 19.75 and Vijaya bank value is 14.45, and compound average growth rate (CAGR) value of BOB is 0.07, Dena Bank is 0.05 and Vijaya Bank is 0.01. PPE values of BOB Mean is 0.13, Dena Bank is 0.00, Vijaya Bank Mean is 0.01 and BOB is better value Mean is 0.13, standard deviation (SD) values of BOB is 0.14, Dena Bank is 0.01 and Vijaya Bank is 0.00, coefficient of variation (CV) value of BOB is 107.63, Dena Bank Value is 498.26 and Vijaya bank value is 45.60, and compound average growth rate (CAGR) value of BOB is -1.60, Dena Bank is -2.07 and Vijaya Bank is 0.09. Therefore before merger, the management efficiency of vijaya bank is better as it is compared to Bank of Baroda and Dena bank during the study period.

Earning Quality (E)

Earning Quality: It is related to the quality of earnings that represents the bank’s profitability, ability to earn consistently, sustainability in long run and growth for future earnings. Earning quality parameters are required to determine the activities to determine dividends, maintaining adequate capital, investments. The following ratios are used to measure the earnings quality

- *DPR – Dividend Pay –out Ratio
- *RA – Return on Asset
- *OPAWF – Operating Profit by Average Working Fund
- *NPAA – Net Profit to Average Asset
- *IITI – Interest Income to Total income
- *OITI – Other Income to Total Income

TABLE 4. Analysis of Earning quality of Bank of Baroda, Dena Bank and Vijaya Bank during 2009-2018

YEAR	BANK OF BARODA						DENA BANK						VIJAYA BANK					
	DPR	RA	OPAWF	NPAA	IITI	OITI	DPR	RA	OPAWF	NPAA	IITI	OITI	DPR	RA	OPAWF	NPAA	IITI	OITI
2009	0.16	0.01	0.02	0.00	0.85	0.15	0.10	0.01	0.02	0.50	0.89	0.11	0.24	0.00	0.01	0.15	0.88	0.12
2010	0.21	0.01	0.02	0.01	0.85	0.15	0.13	0.01	0.01	0.56	0.87	0.13	0.26	0.01	0.02	0.31	0.88	0.12
2011	0.17	0.01	0.01	0.01	0.87	0.13	0.14	0.01	0.02	0.43	0.90	0.10	0.26	0.01	0.01	0.27	0.92	0.08
2012	0.16	0.01	0.01	0.01	0.88	0.12	0.13	0.01	0.02	0.47	0.92	0.08	0.25	0.01	0.01	0.25	0.94	0.06
2013	0.22	0.01	0.01	0.01	0.89	0.11	0.20	0.01	0.02	0.34	0.93	0.07	0.25	0.01	0.01	0.21	0.94	0.06
2014	0.17	0.01	0.01	0.01	0.93	0.10	0.20	0.00	0.01	0.17	0.92	0.08	0.40	0.00	0.01	0.13	0.94	0.06
2015	0.18	0.00	0.01	0.01	0.95	0.09	0.19	0.00	0.01	0.07	0.94	0.06	0.30	0.00	0.01	0.13	0.93	0.07
2016	0.00	-0.01	0.01	-0.01	0.93	0.10	0.00	-0.01	0.01	-0.10	0.94	0.06	0.00	0.00	0.01	0.06	0.93	0.07
2017	0.24	0.00	0.01	0.00	0.91	0.14	0.00	-0.01	0.01	-0.09	0.89	0.11	0.24	0.00	0.02	0.09	0.88	0.12
2018	0.00	0.00	0.01	0.00	0.92	0.13	0.00	-0.02	0.01	-0.19	0.88	0.12	0.26	0.00	0.02	0.05	0.89	0.11
Mean	0.15	0.01	0.01	0.00	0.90	0.12	0.11	0.00	0.01	0.22	0.91	0.09	0.25	0.00	0.01	0.16	0.91	0.09
SD	0.08	0.01	0.00	0.01	0.04	0.02	0.08	0.01	0.00	0.28	0.02	0.02	0.10	0.00	0.00	0.09	0.03	0.03
CV	55.69	122	34.41	142	3.92	16.87	75.75	450	26.94	129	2.59	25.65	40.01	33.96	24.81	56.54	2.83	29.70
CAGR	-0.66	-1.88	-0.06	-1.98	0.01	-0.02	-0.53	-2.07	-0.05	-1.90	0.00	0.00	0.01	0.02	0.02	-0.12	0.00	0.00

Source: Annual Reports of Bank of Baroda, Dena Bank and Vijaya Bank (2009-2018)

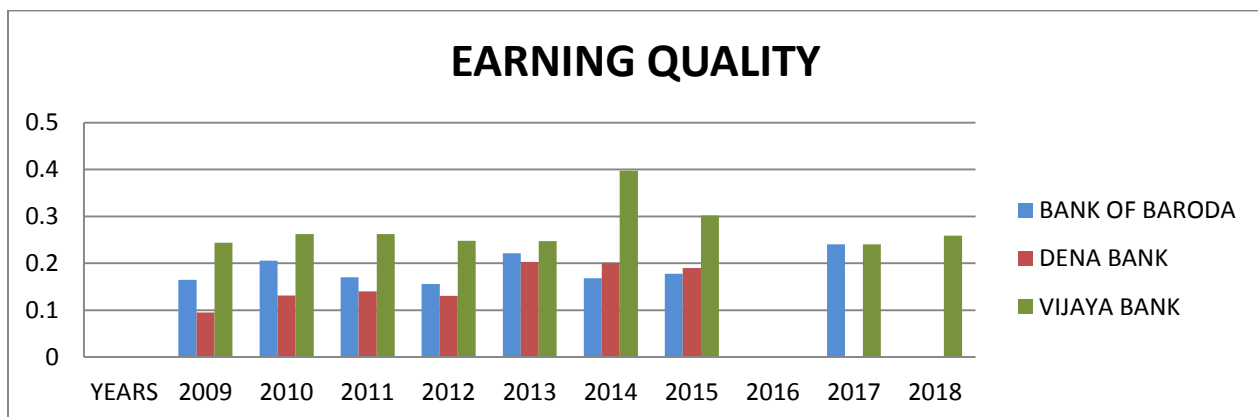


Fig. 4. Analysis of Earning quality of Bank of Baroda, Dena Bank and Vijaya Bank during 2009-2018

It is observed from figure 4 that before merger the earning quality of Vijaya Bank is better when it is compared to bank of Baroda and Dena Bank during the study period.

Table – 4 Presents Camel running of earning quality ratios of Three Banks of Baroda (BOB), DENA BANK (D.B), Vijaya Bank (V.B) from 2009-2018.

It is observed from table 4 that the Earning ability analysis on CAMEL Model in the BOB value is DPR year wise range from 0.00 to 0.24, RA year wise range from -0.01 to 0.01, OPAWF year wise range from 0.01 to 0.02, NPAA year wise range from- 0.01 to 0.01, IITI year wise range from 0.85 to 0.95 and OITI year wise range from 0.09 to 0.15. They

comparing for Dena Bank value is DPR year wise range from 0.00 to 0.20, RA year wise range from 0.01 to 0.02, OPAWF year wise range from 0.01 to 0.02, NPAA year wise range from -0.09 to 0.56, IITI year wise range from 0.87 to 0.94 and OITI year wise range from 0.06 to 0.13. Then comparing for vijaya Bank value is DPR year wise range from 0.00 to 0.26, RA year wise range from 0.00 to 0.01, OPAWF year wise range from 0.01 to 0.02, NPAA year wise range from 0.05 to 0.31, IITI year wise range from 0.88 to 0.94 and OITI year wise range from 0.06 to 0.12. There are Earning Ability result between SBI and ICICI Bank on CAMEL Model.

It is known that DPR Mean values of BOB is 0.15 and Dena Bank is 0.11, Vijaya Bank is 0.25 and Vijaya Bank value is better is 0.25, SD values of BOB is 0.08, Dena bank is 0.08 and vijaya Bank is 0.10, CV value of BOB is 55.69, Dena Bank is 75.75 and Vijaya Bank value is 40.01, and CAGR value of BOB is -0.66, Dena Bank is -0.53 and Vijaya Bank is 0.01. RA Mean values of BOB is 0.01 and Dena Bank is 0.00, Vijaya Bank is 0.25 and BOB value is better is 0.25, SD values of BOB is 0.01, Dena bank is 0.01 and vijaya Bank is 0.10, CV value of BOB is 122, Dena Bank is 450 and Vijaya Bank value is 40.01, and CAGR value of BOB is -1.88, Dena Bank is -2.07 and Vijaya Bank is 0.01. OPAWF values BOB is 0.01 and Dena Bank is 0.01 and Vijaya Bank is 0.01, SD values of BOB is 0.00, Dena bank is 0.00 and vijaya Bank is 0.00, CV value of BOB is 34.41, Dena Bank is 26.94 and Vijaya Bank value is 24.81, and CAGR value of BOB is -0.06, Dena Bank is -0.05 and Vijaya Bank is 0.02. NPAA values of BOB is 0.00 and Dena Bank is 0.22, Vijaya Bank is 0.16 and Dena Bank value is better is 0.22, SD values of BOB is 0.01, Dena bank is 0.28 and vijaya Bank is 0.09, CV value of BOB is 1.42, Dena Bank is 129 and Vijaya Bank value is 56.54, and CAGR value of BOB is -1.98, Dena Bank is -1.90 and Vijaya Bank is -0.12. IITI values of BOB is 0.90 and Dena Bank is 0.91, Vijaya Bank is 0.91 and Dena Bank value is better is 0.91, SD values of BOB is 0.04, Dena bank is 0.02 and vijaya Bank is 0.30, CV value of BOB is 3.92, Dena Bank is 25.65 and Vijaya Bank value is 2.83, and CAGR value of BOB is

0.01, Dena Bank is 0.00 and Vijaya Bank is 0.00. OITI values of BOB is 0.12 and Dena Bank is 0.09, Vijaya Bank is 0.09 and BOB value is better is 0.12, SD values of BOB is 0.02, Dena bank is 0.02 and vijaya Bank is 0.03, CV value of BOB is 16.87, Dena Bank is 25.65 and Vijaya Bank value is 29.70, and CAGR value of BOB is 0.02, Dena Bank is 0.00 and Vijaya Bank is 0.00. Therefore, before merger the earning quality of Vijaya Bank is better compared to bank of Baroda and Dena Bank during the study period.

Liquidity (L)

Liquidity: refers to the bank’s ability to meet its financial obligations. Adequate maintenance of liquidity helps the institutions obtain sufficient liquid funds, either by increasing liability or by converting its assets quickly into cash. Banks have to take a proper care to hedge the liquidity risk and also ensuring funds to be invested in high return generating securities in order to generate profit and meet the liquidity to the depositors. The following ratios are used to measure the liquidity

- *LATA – Liquid Asset to Total Asset
- *GSTA – Government Securities to Total Asset
- *ASTA – Approved Securities to Total Asset
- *LADD – Liquid Asset to Demand Deposit
- *LATD – Liquid Asset to Total Deposit

It is observed from figure 5, that when it is compared to Bank of Baroda and Dena Bank, the liquidity of Vijaya Bank is good during the study period before merger.

It is noted from table 5, that the liquidity performance analysis on CAMEL Model in the BOB value is LATA year wise range from 0.02 to 0.06, GSTA year wise range from 0.14 to 0.20, ASTA year wise range from 0.02 to 0.05, LADD year wise range from 0.28 to 0.65 and LATD year wise range from 0.02 to 0.06. They comparing for Dena Bank value is LATA year wise range from 0.04 to 0.10, GSTA year wise range from 0.21 to 0.27, ASTA year wise range from 0.04 to 0.07, LADD year wise range from 0.82 to 1.39 and LATD year wise range from 0.05 to 0.12.

TABLE 5. Analysis of liquidity of Bank of Baroda, Dena Bank and Vijaya Bank during 2009-2018

YEAR	BANK OF BARODA					DENA BANK					VIJAYA BANK				
	LATA	GSTA	ASTA	LADD	LATD	LATA	GSTA	ASTA	LADD	LATD	LATA	GSTA	ASTA	LADD	LATD
2009	0.05	0.18	0.05	0.55	0.05	0.10	0.21	0.05	1.39	0.12	0.09	0.16	5.98	1.38	0.11
2010	0.05	0.18	0.04	0.56	0.05	0.08	0.23	0.04	0.94	0.08	0.06	0.19	2.70	0.91	0.07
2011	0.06	0.17	0.03	0.65	0.06	0.07	0.22	0.05	0.86	0.07	0.06	0.22	1.61	0.95	0.07
2012	0.05	0.15	0.03	0.56	0.05	0.06	0.22	0.04	0.71	0.07	0.05	0.25	0.47	0.97	0.05
2013	0.02	0.19	0.04	0.28	0.02	0.08	0.24	0.07	1.26	0.09	0.04	0.24	0.32	0.75	0.04
2014	0.03	0.15	0.03	0.37	0.03	0.05	0.23	0.06	0.91	0.06	0.04	0.24	0.18	0.94	0.04
2015	0.03	0.14	0.03	0.42	0.04	0.07	0.22	0.06	1.39	0.08	0.05	0.25	0.19	0.97	0.05
2016	0.03	0.15	0.03	0.61	0.04	0.04	0.23	0.04	0.83	0.05	0.04	0.24	0.19	0.94	0.05
2017	0.03	0.16	0.02	0.49	0.04	0.05	0.27	0.04	0.82	0.05	0.04	0.26	0.18	0.08	0.04
2018	0.03	0.20	0.03	0.53	0.04	0.05	0.25	0.07	0.97	0.06	0.02	0.20	0.16	0.07	0.03
Mean	0.04	0.17	0.03	0.50	0.04	0.06	0.23	0.05	1.01	0.07	0.05	0.22	1.20	0.80	0.06
SD	0.01	0.02	0.01	0.11	0.01	0.02	0.02	0.01	0.25	0.02	0.02	0.03	1.88	0.41	0.02
CV	28.01	11.29	27.28	22.50	22.25	29.63	7.31	21.44	24.55	29.32	38.44	14.12	156.79	51.74	38.46
CAGR	-0.04	0.01	-0.07	0.00	-0.02	-0.08	0.02	0.03	-0.04	-0.08	-0.14	0.02	-0.33	-0.28	-0.14

Source: Annual Reports of Bank of Baroda, Dena Bank and Vijaya Bank (2009-2018)

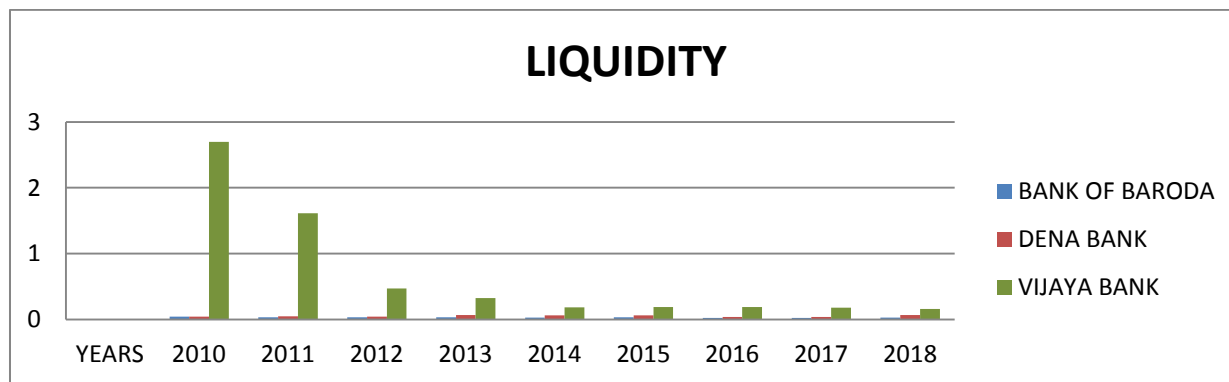


Fig. 5. Analysis of liquidity of Bank of Baroda, Dena Bank and Vijaya Bank during 2009-2018

Then comparing for Vijaya Bank value is LATA year wise range from 0.02 to 0.09, GSTA year wise range from 0.16 to 0.26, ASTA year wise range from 0.16 to 5.98, LADD year wise range from 0.07 to 1.38 and LATD year wise range from 0.03 to 0.11. There are Liquidity result between SBI and ICICI Bank on CAMEL Model.

It is known that LATA mean value of BOB is 0.04, Dena Bank is 0.06 and Vijaya Bank is 0.05, Dena Bank value is better is 0.06. SD values of BOB is 0.01, Dena bank is 0.02 and vijaya Bank is 0.02, CV value of BOB is 28.01, Dena Bank is 29.63 and Vijaya Bank value is 38.44, and CAGR value of BOB is -0.04, Dena Bank is -0.08 and Vijaya Bank is -0.14. GSTA values of BOB are 0.17, Dena Bank is 0.23 and Vijaya Bank is 0.22, Dena Bank value is better is 0.23. SD values of BOB is 0.02, Dena bank is 0.02 and vijaya Bank is 0.03, CV value of BOB is 11.29, Dena Bank is 7.31 and Vijaya Bank value is 14.12, and CAGR value of BOB is 0.01, Dena Bank is 0.02 and Vijaya Bank is 0.02. ASTA values of BOB are 0.03, Dena Bank is 0.05 and Vijaya Bank is 1.20, vijaya Bank value is better is 1.20. SD values of BOB is 0.01, Dena bank is 0.01 and vijaya Bank is 1.88, CV value of BOB is 27.28, Dena Bank is 21.44 and Vijaya Bank value is 156.79, and CAGR value of BOB is -0.07, Dena Bank is 0.03 and Vijaya Bank is -0.33. LADD values of BOB are 0.50, Dena Bank is 1.01 and Vijaya Bank is 0.80, Dena Bank value is better is 1.01. SD values of BOB is 0.11, Dena bank is 0.25 and vijaya Bank is 0.41, CV value of BOB is 22.50, Dena Bank is 24.55 and Vijaya Bank value is 51.74, and CAGR value of BOB is 0.00, Dena Bank is -0.04 and Vijaya Bank is -0.28. LATD values of BOB is 0.04, Dena Bank is 0.07 and Vijaya Bank is 0.05, Dena Bank value is better is 0.07. SD values of BOB is 0.01, Dena bank is 0.02 and vijaya Bank is 0.02, CV value of BOB is 22.25, Dena Bank is 29.32 and Vijaya Bank value is 38.46, and CAGR value of BOB is -0.02, Dena Bank is -0.08 and Vijaya Bank is -0.14. Therefore, compared to Bank of Baroda, Dena Bank, the liquidity of Vijaya Bank is good during the study period before merger.

V. CONCLUSION

Mergers and Acquisitions are the best tools and popular means for acquiring corporate multiplicity and growth. The government's progress to merge two better performing banks Bank of Baroda and Vijaya bank with a weak one Dena bank is a best strategy. The successful merger of these three banks

will pave way for the weaker banks to merge in the near future. Mergers and acquisitions will reduce the capital burden for the government over the long term and enable better management for smaller banks. Merging the banks with one another is a challenging one related to cultural, integration, human resource and operational issues. Mergers executed well would lead to future mergers among the public sector banks which in turn will strengthen and help in the growth of our economy. It is observed from the financial performance that Bank of Baroda is better in capital adequacy, Dena Bank is better in asset quality and Vijaya Bank is better in management efficiency, earning quality and liquidity. The application of CAMEL model to Bank of Baroda, Dena Bank & Vijaya Bank for a period of 2009 to 2018 helps us find the financial performance of these banks.

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