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Financial and Operational Performance Analysis of NABARD

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ABSTRACT

National Bank for Agriculture and Rural Development (NABARD) is the apex institution in the country which looks after the development of the cottage industry, small industry and village industry, and other rural industries. The main focus was to uplift rural India by increasing the credit flow for elevation of agriculture and rural non farm sector. The main functions of NABARD are as follows- I. It provides refinance facilities for agriculture, small scale industries, artisans; cottage and village industries, handicrafts and other allied economic activities so that production may be increased. ii. It can borrow from RBI and the Government of India. The present study is an attempt to evaluate the financial and operational performance of NABARD. The main objectives of the study are to examine financial performance, operational performance and bankruptcy level of the bank. For this purpose CAMEL model and Z-Score model have been used besides other statistical techniques to analyse financial and operational performance of this bank. Through CAMEL model capital adequacy, asset quality, management efficiency, earning quality and liquidity level are evaluated and through z-score model bankruptcy level of the bank is evaluated. After identifying the weaknesses through study, significant suggestions have been given.

(Key Words: Financial Performance, Operational Performance, Capital Adequacy, Asset Quality, Earning Quality, Liquidity Position and Bankruptcy)

INTRODUCTION

National Bank for Agriculture and Rural Development (NABARD): The NABARD has been functioning as an apex development bank in the rural and agriculture sector in India since its establishment on 12th July, 1982. Head-quartered in financial capital of India, i.e. Mumbai (Maharashtra), it operates through 30 Regional Offices in State Capitals, 391 District Offices besides large number of branches throughout the nation. It is committed to rural prosperity through intervention of credit and developmental activities. Its paid-up capital is Rs.3000 crores against the authorised capital of Rs.5000 crores. and aggregate assets rose to Rs. 2,13,170 crores as on 31 March 2013, an increase of Rs.30,700 crores (17 %) compared to the position as on 31st March 2012. The compounded annual growth rate in owned funds of NABARD has been 12.10% during 2009 to 2017 and increasing trend is observed in CAGR of deposits, borrowings, loans issued and profits with 13.62%, 26.9%, 12.31% and 7% respectively. The main focus of the bank is to uplift rural India by increasing the credit flow for elevation of agriculture and rural non farm sector.

REVIEW OF LITERATURE

A number of research studies have been conducted by various experts, scholars and analysts and recommendations are given by various committees.

Maan and Singh (2013), this study attempted pattern of regional distribution of institutional agricultural credit by commercial banks and growth of agriculture. This study found that the commercial banks have succeeded in reducing the regional gaps in the supply of farm finance. It had also taken over the ARDC (Agricultural Refinance and Development Corporation), developing a strong and efficient credit delivery system which is capable of taking care of the expanding and diverse credit needs for agriculture and rural development was a task that received the attention of NABARD

Prof. Mohammed Yunns (2004), studied suggested the successes of SHGs in empowering women. At the core SHG philosophy is the concern to gain control over capital by rural, poor women by virtue of spendthrift, gaining access to a

financial pool of their own in time of need or to start income generation activity. A positive derived from Group psychology has been applied to SHG movement in developing countries.

Atul Raman (2012) concluded that financial inclusion plays a major role in driving away the poverty from the country. In India a day will come when all Indian have their bank accounts and everybody will take part in financial inclusion. The objective of the paper is to access the Indian experience in the field of Financial Inclusion. The secondary data has been used from various sources to analyze the role of Reserve Bank of India in promoting Financial Inclusion.

Archana H. N(2013), studied Financial inclusion is delivery of financial services at an affordable cost to the vast sections of the disadvantaged and low-income groups, providing them with timely and adequate access to the financial products, services like Bank Accounts, Savings Products, Remittances & Payment services, Insurance, advisory services, Entrepreneurial and Micro credit, Micro finance. This paper is directed towards understanding the importance of Financial Inclusion for Inclusive Growth; it also aims at analyzing the role of various institutions like MFIs, SHGs, and RRBs in achieving Financial Inclusion.

Garg (2014), focused on approaches adopted by various Indian banks towards achieving the ultimate goal of financial inclusion for inclusive growth in India and analysed of past years progress and achievements. The relevant data for this study has been collected with the help of from various Research journals, Articles, reports of RBI, reports of NABARD and online resource

Mittal and Dhade (2009) found that CAMEL rating has been used by most banks across the world as a performance evaluation technique. They tried to find out the awareness level, as well as the perception among bank employees about CAMEL rating, and the efforts made by them for improving the ratings of their banks. They found that there has been comparatively less awareness among executives of private sector banks, and hence, they do not perceive it positively, whereas foreign banks enjoy a high degree of awareness and positivity among their employees.

Nachane and Ghosh (2009) examined the impact of credit rating on capital adequacy ratios of Indian state-owned banks using quarterly data for the period 1997 to 2004. They concluded that for both (short and long term) ratings, capital adequacy ratios are an important factor impinging on credit rating of Indian state-owned banks.

Objectives of the Study:
The study under consideration proposes to achieve the following objectives:

i) To study and examine the financial performance of National Bank for Agriculture and Rural Development (NABARD)
ii) To scan and analyse the operational performance of NABARD
iii) To inspect into the viability/bankruptcy level of NABARD

RESEARCH METHODOLOGY

A. Type of Research and Data Collection: The present study is analytical and descriptive in nature. The data has been collected from secondary sources, i.e. Annual Financial Statements of the Bank, Research Journals, Financial Reports, Reports published by Government, e-newspapers etc. The data has been taken for five years i.e. from 2009-2010 to 2016-2017.

B. Hypothesis of the study:
H_{01}: There is no significant difference in the financial performance of NABARD during the study period.
H_{02}: There is no significant difference in the operational efficiency of NABARD during the study period
H_{03}: There is no significant difference in the bankruptcy level of NABARD during the study period.

C. Statistical Tools and Techniques:
The CAMEL Model and Z-Score model have been applied besides ratio analysis and statistical techniques like- t-test and ANOVAs.

a) Ratios to measure profitability:

i. Return on Capital Employed

$$\text{ROCE} = \frac{\text{NPAT}}{\text{TA}} \times 100$$ (Wherein, NPAT=Net Profit after tax, TA=Total Assets)

ii. Profit Margin= $\text{PM} = \frac{\text{NP}}{\text{TI}} \times 100$ (wherein, NP=Net Profit, TI=Total Income)

b) Ratios to measure current obligation:

i. Cash-Assets ratio– $CAR = \frac{C}{TA} \times 100$ (wherein, C=Cash, TA=Total Assets)

ii. Cash-Deposit ratio– $CDR = \frac{C}{TD} \times 100$ (wherein, C=Cash, TD=Total Deposit)

c) Ratios to measure solvency:

i. Outside Liabilities to Total Assets–

$$OLTA = \frac{TB}{TA} \times 100$$ (Wherein, TB=Total Borrowings, TA=Total Assets)

ii. Interest coverage ratio or debt service ratio= $ICR = \frac{PBIT}{TIE} \times 100$ (wherein, PBIT=Profit before Interest and Taxes, TIE=Total Interest Expenditures)

d) Ratios to measure efficiency:

i. Operating Efficiency Ratio= $OER = \frac{TOE}{TA} \times 100$ (wherein, TOE=Total Operating Expenses, TA=Total Assets)

ii. Cost of funds= $COF = \frac{TIE}{TB} \times 100$ (wherein, TIE=Total Interest Expenses, TB=Total Borrowings)

e) Ratios to measure risk:.

i. Equity Assets Ratio= $EAR = \frac{TE}{TA} \times 100$ (wherein, TE=Total Equity, TA=Total Assets)

ii. NNPA to Sales– $NNPS = \frac{NNPA}{S} \times 100$ (wherein, NNPA=Net Non Performing Assets, S=Sales)

f) CAMEL Model:

The composite ratings are assigned in the model in terms of 1-5 numerics. The number 1 indicates the highest rating, strongest performance, least degree of supervision concern, and sound health, while 5 indicates lowest rating, inadequate performance and weak health of bank and so receiving highest degree of supervisory concern.

CAMEL Model – Efficiency Parameters

Sr. No.	**Efficiency Parameters**	**Measurement Ratios**	**Rating** (on a five point scale)
1	Capital Adequacy	Risk weighted capital to Assets	**5** = 1-5, **4** = 6-10, **3** = 11-15, **2** = 16-20, **1** = more than 20
2	Asset Quality	NPA to Advances	**5** = more than 11, **4** = 8-10, **3**= 5-7, **2** = 2 - 4, **1** = less than 1
3	Management	Net Profit per Employee	**5** = less than 1, **4** = 1 - 2, **3** = 2 - 3, **2** = 3 - 4, **1** = more than 4
4	Earning Quality	Return on Assets	**5** = 0-0.5, **4** = 0.6-1.0, **3** = 1.1-1.5, **2** = 1.6-2.0, **1** = more than 2.0
5	Liquidity Position	Cash to Deposit	**5** = less than 5, **4** = 7 - 9, **3** = 10-12, **2** = 13-15, **1** = more than 15

g) Altman Z-Score Model:

The model is defined as: $Z=0.012X_1 + 0.014X_2 + 0.33X_3 + 0.006X_4 + 0.999X_5$, Wherein, the variables X1 to X_4 are computed as absolute percentage values while X_5 is obtained in number of times and signify as: $\mathbf{X_1}$ is the ratio of working capital to total assets, X2 **is** the ratio of retained earnings to total assets, $\mathbf{X_3}$ is the ratio of earnings before

interest and tax to total assets, X4 is the ratio of market value of equity to book value of debt, X5 is the ratio of sales to total assets. The model discriminate three categories in relation to the financial performance as given below:

Category	Z-score value	Inference/Implications
i	Below 1.8	Bankruptcy zone
ii	1.8 – 3.0	Good Performance
iii	Above 3.0	Very Healthy performance

RESULTS AND DISCUSSION

The National Bank for Agriculture and Rural Development (NABARD) has been playing pivotal role in the rural development all over India. A detailed discussion is made on the analysis of financial and operational performance of the bank in the following section.

A. Financial Performance Analysis of NABARD: The financial performance of the bank has been evaluated considering profitability, liquidity, solvency, efficiency and risk ratios as discussed below.

Table: VI.A. Financial Performance Analysis of NABARD (Year 2009-17)

	Profitability Ratio		Liquidity Ratio		Solvency Ratio		Efficiency Ratio		Risk Ratio	
Year	ROCE	PM	CAR	CDR	OLTA	ICR	OER	COF	EAR	NNPS
2009-10	1.14	19.60	7.11	13.75	3.79	45.72	0.41	6.60	21.02	0.015
2010-11	0.81	13.95	6.84	13	4.83	29.63	0.71	6.80	18.82	0.021
2011-12	0.90	14.95	4.76	8.9	2.38	30.10	0.57	7.50	17.83	0.022
2012-13	0.85	14.11	4.31	7.89	1.46	29.75	0.53	7.59	16.55	0.012
2013-14	0.79	12.40	5.43	8.23	0.40	25.41	0.51	6.75	14.89	0.008
2014-15	0.85	13.61	4.65	7.04	3.33	26.90	0.46	6.53	14.23	0.009
2015-16	0.82	12.21	6.09	9.97	6.64	24.01	0.50	7.25	14.038	0.008
2016-17	0.77	11.98	3.77	6.8	1.003	23.89	0.59	8.15	13.68	0
Average	0.865	14.10	5.37	9.44	2.98	29.43	0.53	7.15	16.38	0.012
S.D	0.123	2.45	1.21	2.62	2.10	7.05	0.09	0.57	2.65	0.007
t-value	0.121 (0.907)	0.005 (0.996)	0.010 (0.992)	0.008 (0.99)	0.67 (0.52)	0.000 (1)	0.241 (0.816)	0.001 (0.99)	0.006 (0.99)	0.120 (0.91)

(Source: Calculated from Financial Reports of NABARD)

It is construed from the above table VI.A. that two ratios each have been taken under five financial parameters, i.e. Profitability, Liquidity, Solvency, Efficiency and Risk parameters and inferred as below.

i. Profitability Analysis: Profits are a measure of creditworthiness or worth of investment for owners and profit earning is essential for the survival of all banks. There is declining trend in ROCE and PM during the study period with mean value 0.86 and 14.10 respectively as discussed in above table. The standard deviation in both the cases is 0.123 and 2.45. The declining and lower ratio signifies that bank is deficient in utilizing the total investments made in fixed/current assets and generating lesser returns. There is no significant difference in ROCE and PM as t-value was 0.121(sig. 0.907) and 0.005 (sig 0.99) during the study period.

ii. Liquidity Analysis: Liquidity refers to the ability of a concern to meet its current obligations as and when these become due. The Cash Asset Ratio (CAR) reflects the liquidity level against the asset base of the bank and higher ratio is considered better. There is declining trend in CAR and CDR during the study period with mean 5.37 value and 9.44 respectively. The standard deviation in both the cases is 1.21 and 2.62. There are no significant difference in both ratio CAR as t-value was 0.010 (sig. 0.992) and CDR with t-value 0.008 (sig 0.99) during the study period. Lower ratios (liquidity) may impact the creditworthiness and payment capacity negatively meaning thereby the bank may face problem of timely payment to the depositors due to shortage of cash which ultimately may adversely affect the creditworthiness and profitability.

iii. Solvency Analysis: The average OLTA ratio for NABARD was 2.98. The bank with lower OLTA is treated as more solvent. The Standard deviation in the ratio was 2.10 and t-value was 0.67 (sig. 0.52) which prove no significant difference in the calculated ratios. The average Interest coverage ratio (ICR) or debt service ratio was 29.43 with decreasing trend which is alarming for bank to revive. There must be sufficient amount/percentage of profits to pay for

interest to the creditors/depositors otherwise may impact the creditworthiness negatively. The Standard deviation in the ratio was little high as 7.05 and the t-value 0.000(1) was no significant difference at 0.05 level.

iv. Efficiency Analysis: The lesser the proportion of operating expenditure to total assets, the better is for the bank as more profit will be available to meet other expenditures and ultimately more earnings will be available in the hands of owners. In case of NABARD the OER and COF both are on increasing trend with average value 0.53 and 7.15 respectively. The values of standard deviation are 0.09 and 0.57 respectively. The t-value 0.241 (sig. 0.816) in case of OER and t-value was 0.001 (sig. 0.99) in case of COF. There is no significant difference in the both ratios. The bank is in efficient situation in case of operating efficiency ratio and Cost of funds ratio because both ratios values in lesser proportion. However, cost of funds depends upon the interest rates prevailing in the market, yet the banks can minimize it with efficient management and better prediction.

v. Risk Analysis: The average proportion of equity assets ratio (EAR) for the NABARD has been (16.38) which reflects how many assets can default before the equity is eroded. The higher the ratio, the lesser is the risk for a bank. The standard deviation was 2.65 and the t-value was 0.006 (sig.0.99) was no significant differences at 0.05 level. The NNPS ratio should not be greater than 3 as per the RBI guidelines but in case of NABARD the average NNPS is 0.012 and on decreasing trend which indicate that bank is entering in safe zone. The standard deviation was (0.007) and the t-value 0.120 (sig. 0.91) was no significant difference at 0.05 level.

VI.B. Operational Performance Analysis of NABARD: The operation performance analysis of the bank is made through CAMEL Model. The CAMEL Model includes mainly five parameters as discussed below.

Table: VI.B. Operational Performance Analyses through CAMEL Ratings/Model (Year (2010-17)

Year	Capital Adequacy	Assets Quality	Management Efficiency	Earning Quality	Liquidity Position
2009-10	24.95(1)	0.0156(1)	0.33(5)	1.23(3)	13.75(2)
2010-11	21.76(1)	0.0213(1)	0.27(5)	0.88(4)	13(2)
2011-12	20.55(1)	0.0225(1)	0.36(5)	0.98(4)	8.9(4)
2012-13	18.24(2)	0.0122(1)	0.41(5)	0.94(4)	7.89(4)
2013-14	16.61(2)	0.0089(1)	0.44(5)	0.82(4)	8.23(4)
2014-15	16.91(2)	0.0092(1)	0.59(5)	0.93(4)	7.04(4)
2015-16	17.59(2)	0.0088(1)	0.62(5)	0.85(4)	9.97(4)
2016-17	17.71(2)	0.00(1)	0.65(5)	0.82(4)	6.8(4)
Mean	19.29	0.012	0.46	0.93	9.44
S.D	2.9	0.007	0.143	0.133	2.62
t-value	0.000 (1)	0.12 (0.90)	-0.024 (0.98)	0.026 (0.97)	0.008 (0.99)

(Source: Calculated from secondary data in Annual Reports of NABARD)

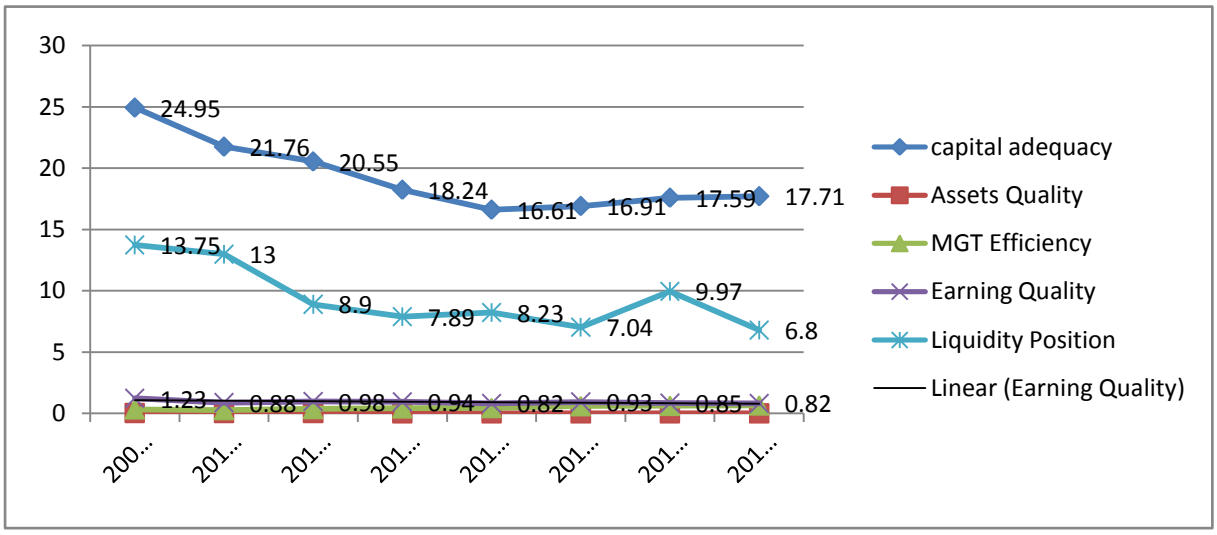

Figure: VI.B. Graphical Presentations of CAMEL Values of NABARD

It is visible in the above table and figure VI.B. that NABARD has been performing well on capital adequacy, asset quality and parameters with ratings between 1 and 2. The values of asset quality have been decreasing every year; it is good sign of bank. The NABARD has been in Indicates critically deficient management efficiency with rating 5 throughout the study period. The rating proves that failure of the bank to deploy its work force effectively. A higher value of earning quality (Return on Assets) denotes higher profitability but NABARD has rating between 3-4 which indicates less than satisfactory or deficient level of returns on assets (earnings quality). The NABARD has been in Indicates a poor level of liquidity position with rating 4 throughout the study period. The rating proves the critically deficient liquidity position of the bank. There is no significant difference in the all ratio values of CAMEL model during the study period.

VI.C. Analysis of Financial Viability of National Bank for Agriculture and Rural Development (NABARD):

Table: VI.C. Z-Score Values of NABARD (Year 2009-2017)

Year	Model Parameters					Z Score
2009-10	0.041	0.016	0.55	0.28	0.88	1.77
2010-11	0.039	0.011	0.38	0.36	0.79	1.58
2011-12	0.014	0.012	0.41	0.46	0.88	1.73
2012-13	0.006	0.019	0.408	0.49	0.86	1.78
2013-14	0.021	0.010	0.36	0.36	0.84	1.59
2014-15	0.015	0.0117	0.39	0.39	0.86	1.67
2015-16	0.029	0.0114	0.39	0.45	0.83	1.72
2016-17	-0.00512	0.0108	0.36	0.57	0.87	1.82

(Source: Calculated from Financial Reports of NABARD)

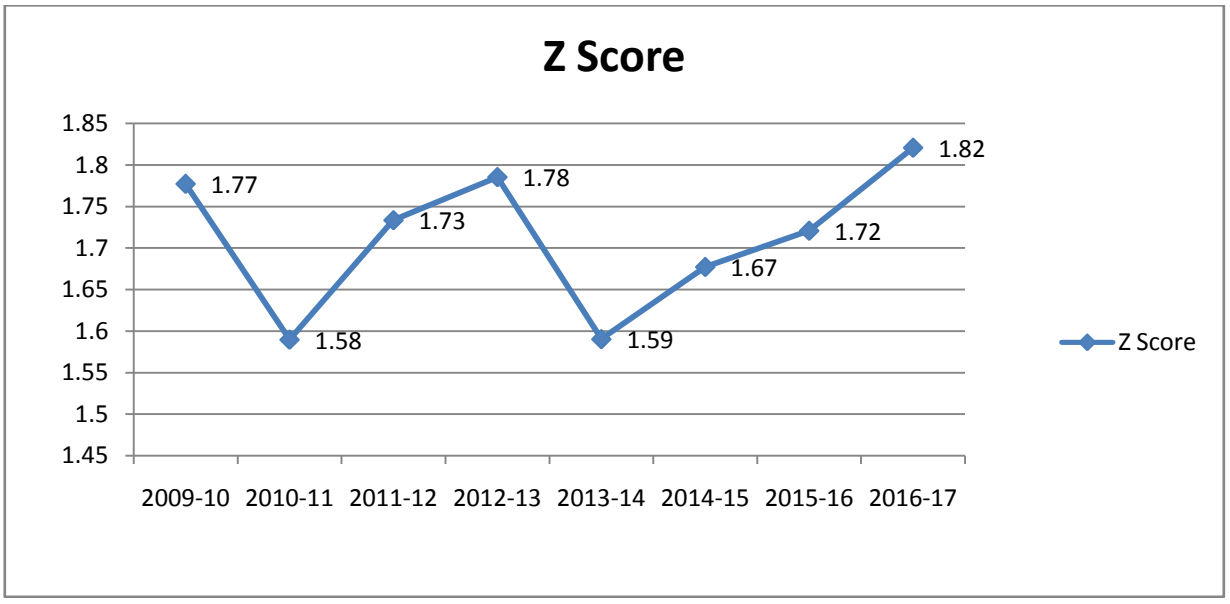

Figure: VI.C. Graphical presentations of Z score values of NABARD

It can be interpreted from the above table and figure VI.C. that the viability/bankruptcy situation of the bank is crisscross due to zigzag trend of z-score values. Except the year 2017, the z-score values had been below 1.8 (standard level) which signify weak performance of the bank during the study period. The average value noticed is 1.71 which is also below 1.8 which signifies that NABARD is in the bankruptcy (weak performance) zone. However, with the increased value in 2017, i.e.1.82 the bank was expected to revive. Being apex institution in cooperative, rural and agricultural credit, it becomes mandatory and imperative for the bank to perform better otherwise whole rural-agriculture sector may face turbulence due to weak performance of this national level prestigious institution.

FINDINGS AND SUGGESTIONS

- The NNPS ratio is decreasing trend which indicates that bank is entering in safe zone.
- NABARD has been performing well on capital adequacy, asset quality with ratings between 1 and 2. The values of asset quality have been decreasing every year; it is good sign of bank.

- Return on Capital Employed (ROCE) and Net Profit Margin (PM) ratio. There is declining trend in ROCE and PM during the study period
- A higher value of earning quality (Return on Assets) denotes higher profitability but NABARD has rating between 3-4 which indicates less than satisfactory or deficient level of returns on assets (earnings quality). The NABARD has been in Indicates a poor level of liquidity position with rating 4 throughout the study period.
- While sanctioning loans and advances fundamental business risks should be considered, instead of relying on just security based lending.
- A clear cut loan policy should be designed. Before sanctioning any loan every application should be scanned properly and loan should be sanctioned on the basis of credit appraisal/ Appraisal memorandum prepared by specialized credit risk department.
- NABARD recently started a project that is m-KCC (Mobile Kisan Credit Cards) in Villuperam district in Tamil Nadu on 2nd October, 2011. This method provides banking facilities to the KCC holders at their home in a safe, secure, quick and reliable manner through mobile phones.

CONCLUSION

The NABARD has been better performance in solvency, efficiency and risk parameters. There are below average performance in profitability and liquidity parameters. In the profitability parameter declining and lower ratio signifies that bank is deficient in utilizing the total investments made in fixed/current assets and generating lesser returns. In the liquidity parameter bank have face problem of timely payment to the depositors due to shortage of cash which ultimately may adversely affect the creditworthiness and profitability. The bank is in efficient situation in case of operating efficiency ratio and Cost of funds ratio because both ratios values in lesser proportion. The bank with lower OLTA is treated as more solvent. Equity assets ratio (EAR) for the NABARD has been sufficient capital base remain in improvement situation and face effortlessness in making adequate use of assets for earning. NNPS with decreasing trend which indicates that bank is entering in safe zone.

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