

# DETERMINANTS OF CO-OPERATIVE BANK'S PROFITABILITY IN KARNATAKA STATE: EVIDENCE FROM VIJAYAPUR DISTRICT

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Financial performance of a bank indicates the strength and weakness of that particular bank by properly establishing the association between the items of the balance sheet and profit & loss account. The present study is a comparative analysis of the financial performance of Co-operative banks. The study considered a sample of 20 Co-operative banks for the period from 2008-09 to 2012-13. Profitability ratios were used in the study to measure the performance of the considered banks. The profitability ratios indicated that Interest Income, Interest Expended, Spread, Non-Interest Income, Non Interest Expenditure, Burden, Net Profit & Return on Capital Employed proved the financial soundness of SSCB, BPCB, AUCB and MCB. But after monitoring the changes in these profitability ratios, it is clear that the banks have to improve its operational strategy; only then it will be able to attract more customers and investors. For sound financial health, banks need to put in more effort to be efficient in generating greater profits per rupee of sale.

The results of the t-test disclosed that there is a significant difference in profitability performance of the Co-operative banks in Vijayapur District.

**Key words:** financial performance, Indian Co-operative Banks, Profitability ratios, financial health.

## Introduction

Co-operative banks are an integral part of the Indian financial system. They comprise urban co-operative banks and rural co-operative credit institutions. Co-operative banks in India are more than 100 years old. These banks came into existence with enactment of the Agricultural credit Co-operative Societies Act in 1904. These banks operate mainly for the benefit of rural areas, particularly the agricultural sector. Co-operative banks mobilize deposits and supply agricultural and rural credit with a wider outreach. They are

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the main source of institutional credit to the farmers. Co-operative banks are chiefly responsible for breaking the monopoly of moneylenders in providing credit to agriculturists. They have also been an important instrument for various development schemes, particularly subsidy-based programme for the poor. Co-operative banks operate for the poor and operate for non-agricultural sector also but, their role is small.

### **Need for the Study**

In today's world of uncertainty, people have become conscious about their saving and investment in the safest way. They are also in search for an institution from where in case of need they can get easy and cheap credit, which is near to their residence and where they can be treated as a family member. The co-operative banking sector is the only one where people can find all these qualities and get good return on their investment as well. Co-operative banks play very important role in providing banking services to common man in their area of co-operation. A small depositor or a small borrower feels comfortable in dealing with the local staff of co –operative bank than to the staff of nationalized banks and private sector banks.

Distinctive features of the co-operatives banks as compared to other banks have motivated the researcher to undertake research on the financial position of the co-operative banks. In fact, no research has been undertaken the study in relation to financial aspects of co-operative banks which are operating in Bijapur District of Karnataka state. Therefore, the researcher has undertaken the research study entitled, Determinants of Co-operative Bank's Profitability in Karnataka State: Evidence from Vijayapur District.

### **Statement of the Problem**

Before adaption of new economic policy of 1991, co-operative banks were very efficient to fulfill the need of local people and so their social and economic contribution was quite significant.

But the launching of new economic policy resulted in the liberalization delicensing and deregulation in the free economy. In the light of this policy, along with other sector of the economy, various reformers were introduced in the banking sector in particular and in co-operative banks in particular.

Co-operative banks work under the regulation of RBI and co-operative department of state government. RBI introduced prudential norms to strengthen the bank's balance

sheet and enhance transparency. These prudential norms relates to the income recognition, asset classification, providing for bad and doubtful debts and capital adequacy. They imposed various policy measures on co-operative banks like deregulation of interest rates, changes in SLR, CRR, liberalization of banks, lending norms, capital adequacy norms and income measurement, allowing the banks to tap the resources from capital market and entry of private and foreign banks in the banking industry has created major challenges before the co-operative banking.

Under such changing environment, to maintain stability, liquidity, profitability, goodwill and overall efficiency is the challenge before the bank management and so they have to transform the traditional way of management into modern and professional management. Hence the tools and techniques of financial performance evaluation should be adopted by the management of the co-operative banks to overcome the situation and to survive in the competition and critical situation before the co-operative banks.

### **Objectives of the Study**

The broader objectives of the study are as under:

1. To analyze the profitability of co-operative banks in Bijapur district.
2. To evaluate the ratios contributing to financial performance of the bank
3. To suggest to improve efficiency of co-operative banks of Bijapur district

### **Hypothesis**

The broader hypothesis is as under:

A) There is no significant difference in profitability trends within all the co-operative banks of Bijapur district.

### **Scope of the Study**

The scope of the study is defined in terms of financial aspects and period under focus.

1. The researcher has selected all the 20 co-operative banks in the district for the study. These 20 banks are from 5 talukas in Bijapur district.
2. The study is based on the annual reports of the banks for a period of 5 years from 2008-09 to 2012-13.
3. The performance of the co-operative banks was measured through profitability ratios.

## Research Methodology

**Sources of Data:** The study is based on secondary data. The secondary data consists of the annual reports of co-operative banks in Bijapur district.

**Period of Study:** The present study covers the span of five years i.e. from 2008-09 to 2012-2013.

**Sampling Design:** In this study, all 20 co-operative banks in Bijapur district have been included for the study.

Name of the Talukas	No. of Banks
A. Bijapur	08
B. Muddebihal	05
C. Sindgi	04
D. Basavan Bagewadi	02
E. Indi	01
<b>Total</b>	<b>20</b>

### A. Bijapur City

1. The Bijapur District Central Co-operative Bank Ltd. Bijapur (BDCCB).
2. Shri Shiddheshwar Co-operative Bank Ltd., Bijapur (SSCB).
3. Bijapur Sahakari Bank Niyamit, Bijapur (BSBN).
4. Bijapur Zilla Sarakari Naukarar Sahakari Bank Niyamit, Bijapur (BZSNSBN).
5. The Bijapur Mahalaxmi Urban Co-operative Bank Ltd., Bijapur (BMUCB).
6. Bijapur District Mahila Co-operative Bank Ltd., Bijapur (BDMCB).
7. The Deccan Urban Co-operative Bank Ltd., Bijapur (DUCB).
8. Chaitanya Mahila Sahakari Bank Ltd. Bijapur (CMSB).

### B. Muddebihal Taluk

1. The Karnataka Co-operative Bank Ltd., Muddebihal (KCB).
2. The Talikoti Sahakari Bank Niyamit, Talikoti (TSBN).
3. The Muslim Co-operative Bank Ltd., Talikoti (MCB).
4. The Bhavasar Kshatriya Co-operative Bank Ltd., Talikoti (BKCB).
5. Shri Sharana Veereshwar Sahakari Bank Niyamita, Nalatwad (SSVSNB).

### C. Sindgi Taluk

1. Sindgi Urban Co-operative Bank, Sindgi (SUCB).
2. Basaveshwar Pattan Co-operative Bank, Sindgi (BPCB).



3. Shree Pragati Pattan Sahakari Bank Niyamit, Devar Hipparagi (SPSBN).
4. Almel Urban Co-operative Bank, Almel (AUCB)

#### **D. Basavan Bagewadi**

1. Shri Basaveshwar Co-operative Bank Ltd., Basavanbagewadi (SBCB).
2. Swami Vivekanand Co-operative Bank, Nidagundi (SVCB).

#### **E. INDITALUK**

1. Shri Revansiddheshwar Pattana Sahakari Bank Niy. Indi (SRPSBN).

**Framework Analysis:** The performance of the co-operative banks was measured through 2 different techniques they are as follows:

**A. Accounting Techniques:** The financial performance of co-operative banks of the district was measured through different ratios. These ratios were selected on the basis of their popularity in literature.

**Profitability Ratio:** Interest Income to Working Fund Ratio, Interest Expended to Working Fund Ratio, Spread to Working Fund Ratio, Non-Interest Income to Working Fund Ratio, Non Interest Expenditure to Working Fund Ratio, Burden to Working Fund Ratio, Net Profit to Working Fund Ratio, Interest Income to Total Income Ratio, Interest Expenditure to Total Expenditure Ratio & Return on Capital Employed Ratio.

**B. Statistical techniques:** ANOVA test was applied for evaluating the performance of co-operative banks of Bijapur district of Karnataka State.

#### **Limitations of the Study**

Due to constraints of time and resources, the study is likely to suffer from certain limitations. Some of these are mentioned here under so that the findings of the study may be understood in a proper perspective. The limitations of the study are:

1. The secondary data was taken from the annual reports of the co-operative bank. It may be possible that the data shown in the annual reports may be window dressed which does not show the actual position of the banks.
2. There are different methods to measure efficiency, effectiveness and profitability. In this connection views of experts differ from one another.
3. The present study is based on the co-operative banks of Bijapur district only. As the size of the sample selected is very small, the limitations of a small sample applicable to this study.

4. The limitations of tools and techniques applied for the analysis are inherent in the present study.
5. Financial statements are normally prepared on the concept of historical cost. They do not reflect values in terms of current cost. Thus, financial analysis on such financial statements or accounting figures would not portray the effects of price level changing over the period.
6. **Only quantitative components were considered for study and qualitative parameters such as manager competency, market share of banks, and exposure to international markets were ignored.**

In spite of all these limitations this study throws light on the important challenging problems of the cooperative banks.

### Analysis and Interpretation

**Table 1**

<b>Banks</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>Average</b>	<b>S. D.</b>
BDCCB	6.63	7.11	6.78	7.58	7.88	<b>7.20</b>	<b>0.53</b>
SSCB	13.44	14.25	14.30	10.22	9.45	<b>12.33</b>	<b>2.32</b>
BSB	9.34	9.40	8.29	9.25	10.38	<b>9.33</b>	<b>0.74</b>
BZSNSB	10.17	9.61	10.63	10.24	10.76	<b>10.28</b>	<b>0.45</b>
BMUCB	8.98	9.02	9.46	9.74	9.22	<b>9.28</b>	<b>0.32</b>
BDMCB	10.27	9.29	9.85	9.48	9.86	<b>9.75</b>	<b>0.38</b>
DUCB	8.72	10.02	9.71	9.68	8.87	<b>9.40</b>	<b>0.57</b>
CMSB	10.35	11.54	8.90	9.87	9.65	<b>10.06</b>	<b>0.98</b>
KCB	8.91	8.17	8.96	9.51	9.45	<b>9.00</b>	<b>0.54</b>
TSB	9.64	9.02	9.10	9.66	10.06	<b>9.50</b>	<b>0.43</b>
MCB	9.78	9.23	8.22	9.37	10.57	<b>9.43</b>	<b>0.86</b>
BKCB	8.89	7.86	8.91	9.46	9.18	<b>8.86</b>	<b>0.61</b>
SSVSB	9.75	9.62	9.66	9.38	10.13	<b>9.71</b>	<b>0.27</b>
SUCB	10.79	9.93	9.13	9.67	9.88	<b>9.88</b>	<b>0.60</b>
BPCB	9.31	8.95	8.08	6.80	9.45	<b>8.52</b>	<b>1.10</b>
SPPSB	10.25	8.51	7.95	9.86	9.81	<b>9.28</b>	<b>0.99</b>
AUCB	10.51	10.80	10.73	11.35	10.36	<b>10.75</b>	<b>0.38</b>
SBCB	7.47	6.89	6.77	8.29	8.73	<b>7.63</b>	<b>0.86</b>
SVCB	12.12	12.18	11.38	10.98	9.92	<b>11.32</b>	<b>0.93</b>
SRPSB	8.74	9.43	8.70	10.56	9.42	<b>9.37</b>	<b>0.75</b>
<b>Average</b>	<b>9.70</b>	<b>9.54</b>	<b>9.28</b>	<b>9.55</b>	<b>9.65</b>	<b>9.54</b>	<b>0.73</b>

**SOURCE:** Computed from the published reports of the banks under study.

**Graph -1**  
**Interest Income to Working Fund Ratio**

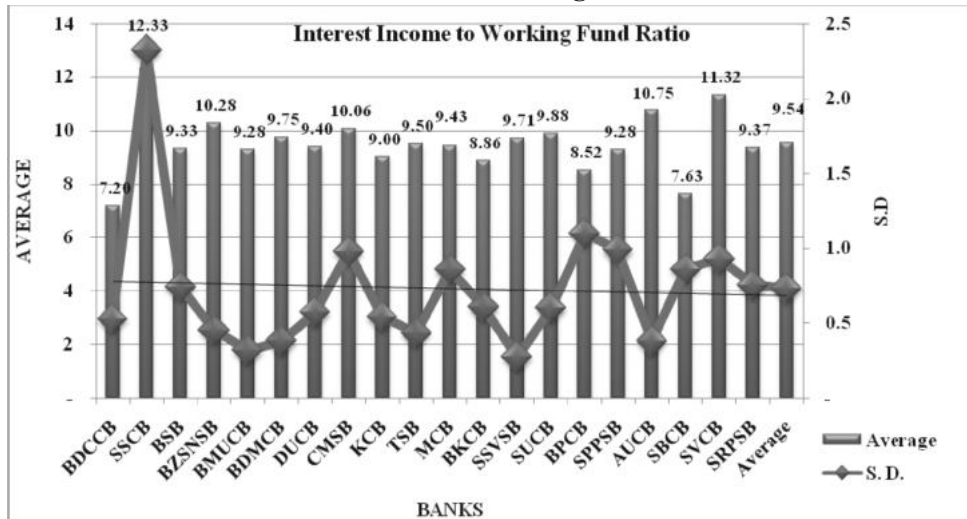


Table 9.1 portrays the rate at which a bank earns its income by lending loans and advances. The interest income is the main source of income for every bank including co-operative bank. The ratio of interest income as a percentage of loans and advances of the selected 20 co-operative banks for the present study period from 2008-09 to 2012-13 is presented in Table 9.1. The analysis of average rate for a period of 5 years reveals that the average rate is the highest (i.e. 12.33%) in the case of SSCB and SYCB (i.e. 11.32%) respectively. This indicates that SSCB and SYCB have fared well during the study period if compared with other banks as far as the ratio of interest income to loans and advances is concerned.

On the other hand, the analysis of consistency in performance with regard to interest income reveals that SSVSB has demonstrated the most consistent performance among all the selected banks by securing the least standard deviation (i.e. 0.27) which indicates the quantum of risk associated with earning interest income and investment activities of SSVSB.

### Anova Test

ANOVA test is employed to analyze the significant difference among the cooperative banks under the present study in respect of their interest income to their working fund ratio owing to the effect factors simultaneously. The following hypotheses are set:

**Null Hypothesis (H<sub>0</sub>):** “There is no significant difference among the cooperative banks in respect of their interest income to their working fund ratio”

**Alternative Hypothesis (H<sub>A</sub>):** “There is a significant difference among the cooperative banks in respect of their interest income to their working fund ratio”

The result of ANOVA Test at 5% (0.05) level of significance is portrayed in Table 9.1(a)

**Table 1(a)**  
**ANOVA Test for Interest Income to Working Fund Ratio**

	Sum of Squares	Diff	Mean Square	F	Sig.
Between The Banks	123.027	19	6.475	8.958	0.000
Within Banks	57.826	80	0.723		
Total	180.852	99			

*Source: Compiled from Table*

The analysis of ANOVA Test Table 9.1(a) reveals that the calculated F value is greater than table value, hence null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is a significant difference of interest income to working fund ratio among the selected banks under study.

**Table 2**  
**Interest Expended to Working Fund Ratio (in percentage)**

<b>Banks</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>Average</b>	<b>S. D.</b>
BDCCB	4.02	5.00	4.37	5.43	5.52	<b>4.87</b>	0.66
SSCB	10.07	9.79	9.52	5.19	4.84	<b>7.88</b>	2.63
BSB	5.38	5.56	4.68	5.61	6.31	<b>5.51</b>	0.58
BZSNSB	6.57	7.16	7.01	6.93	7.62	<b>7.06</b>	0.38
BMUCB	6.22	5.78	6.42	6.27	5.86	<b>6.11</b>	0.28
BDMCB	6.18	5.50	6.59	6.00	6.43	<b>6.14</b>	0.42
DUCB	3.83	4.00	4.62	4.40	4.15	<b>4.20</b>	0.31
CMSB	5.72	6.56	5.22	5.56	6.15	<b>5.84</b>	0.52
KCB	5.20	4.97	5.71	6.33	6.50	<b>5.74</b>	0.67
TSB	5.97	5.86	6.26	6.56	7.03	<b>6.34</b>	0.47
MCB	4.76	4.50	4.32	4.81	5.68	<b>4.81</b>	0.52
BKCB	5.63	4.31	6.00	6.43	6.12	<b>5.70</b>	0.83
SSVSB	5.75	6.05	5.82	6.07	6.44	<b>6.03</b>	0.27
SUCB	6.24	5.59	5.19	5.49	5.40	<b>5.58</b>	0.40
BPCB	3.23	3.27	3.04	3.61	5.51	<b>3.73</b>	1.01
SPPSB	5.26	4.08	3.62	5.82	5.54	<b>4.86</b>	0.96
AUCB	4.58	5.36	4.65	5.49	4.97	<b>5.01</b>	0.41
SBCB	6.62	5.70	5.29	6.94	6.66	<b>6.24</b>	0.71
SVCB	6.64	6.40	6.20	5.91	5.69	<b>6.17</b>	0.38
SRPSB	4.17	4.11	4.31	4.61	4.75	<b>4.39</b>	0.28
<b>Average</b>	<b>5.60</b>	<b>5.48</b>	<b>5.44</b>	<b>5.67</b>	<b>5.86</b>	<b>5.61</b>	0.63

**SOURCE:** Computed from the published reports of the banks under study.

**Graph No: 2**

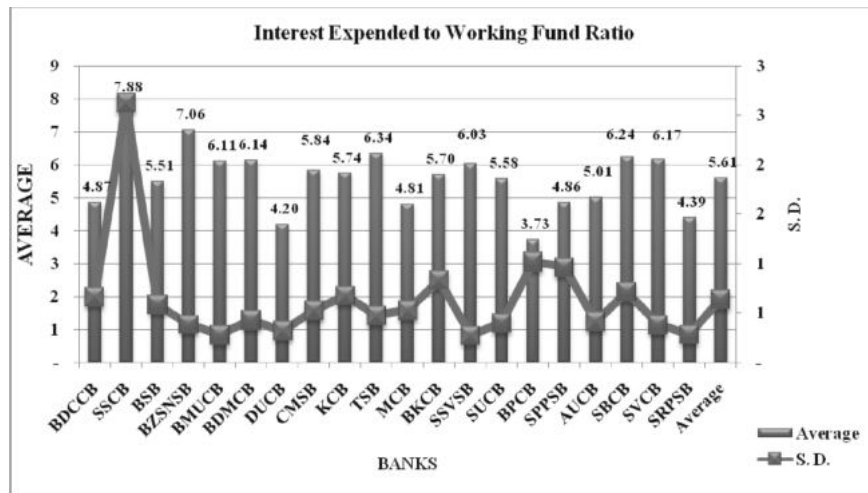


Table 9.2 portrays that measure of the cost of funds incurred by the co-operative banks. In banking sector interest paid occupies a major portion of total operating cost and affects profitability. The ratio of interest paid as a percentage of deposits & borrowings of the selected 20 co-operative banks for the present study period from 2008-09 to 2012-13 is presented in Table 9.2. The analysis of average rate for a period of 5 years reveals that the average rate is the highest (i.e. 7.88%) in the case of SSCB and BZSNSB (i.e. 7.06%) respectively. This indicates that SSCB and BZSNSB shows inefficiency of management in obtaining low cost deposits during the study period if compared with other banks as far as the ratio of interest paid to deposits & borrowings is concerned.

On the other hand, the analysis of consistency in performance with regard to interest expense reveals that SSVCB has demonstrated the most consistent performance among all the selected banks by securing the least standard deviation (i.e. 0.27) which indicates the quantum of risk associated with interest paid of SSVSB.

### Anova Test

ANOVA test is employed to analyze the significant difference among the cooperative banks under the present study in respect of their interest paid to their working fund ratio owing to the effect factors simultaneously. The following hypotheses are set:

**Null Hypothesis ( $H_0$ ):** “There is no significant difference among the cooperative banks in respect of their interest paid to their working fund ratio”

**Alternative Hypothesis ( $H_A$ ):** “There is a significant difference among the cooperative

*banks in respect of their interest paid to their working fund ratio”*

The result of ANOVA Test at 5% (0.05) level of significance is portrayed in Table 9.2(a)

**Table 9.2 (a)**  
**ANOVA Test for Interest Expended to Working Fund Ratio**

	Sum of Squares	Df	Mean Square	F	Sig.
Between The Banks	91.974	19	4.841	7.360	.000
Within Banks	52.618	80	.658		
Total	144.592	99			

*Source: Compiled from Table*

The analysis of ANOVA Test Table 9.2(a) reveals that the calculated F value is greater than table value, hence null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is a significant difference of interest expended to working fund ratio among the selected banks under study.

**Table 9.3**  
**Spread to Working Fund Ratio (in percentage)**

<b>Banks</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>Average</b>	<b>S. D.</b>
BDCCB	2.62	2.11	2.41	2.15	2.36	2.33	0.21
SSCB	3.36	4.46	4.78	5.03	4.61	4.45	0.64
BSB	3.96	3.85	3.62	3.64	4.07	3.83	0.20
BZSNSB	3.60	2.46	3.62	3.31	3.14	3.23	0.47
BMUCB	2.76	3.24	3.05	3.47	3.36	3.18	0.28
BDMCB	4.08	3.78	3.26	3.49	3.43	3.61	0.32
DUCB	4.89	6.02	5.09	5.27	4.72	5.20	0.50
CMSB	4.63	4.98	3.68	4.32	3.51	4.22	0.62
KCB	3.72	3.20	3.25	3.18	2.95	3.26	0.28
TSB	3.68	3.16	2.84	3.10	3.02	3.16	0.31
MCB	5.01	4.74	3.90	4.56	4.89	4.62	0.44
BKCB	3.26	3.55	2.91	3.02	3.06	3.16	0.25
SSVSB	4.00	3.57	3.84	3.31	3.69	3.68	0.26
SUCB	4.55	4.34	3.94	4.18	4.47	4.30	0.24
BPCB	6.08	5.68	5.04	3.18	3.95	4.79	1.21
SPPSB	5.00	4.44	4.32	4.04	4.27	4.41	0.36
AUCB	5.93	5.44	6.08	5.86	5.39	5.74	0.31
SBCB	0.85	1.19	1.48	1.36	2.07	1.39	0.45
SVCB	5.47	5.78	5.18	5.07	4.23	5.15	0.58
SRPSB	4.57	5.32	4.39	5.95	4.67	4.98	0.65
<b>Average</b>	<b>4.10</b>	<b>4.07</b>	<b>3.83</b>	<b>3.87</b>	<b>3.79</b>	<b>3.93</b>	<b>0.43</b>

**SOURCE:** *Computed from the published reports of the banks under study.*

**Graph No: 3**

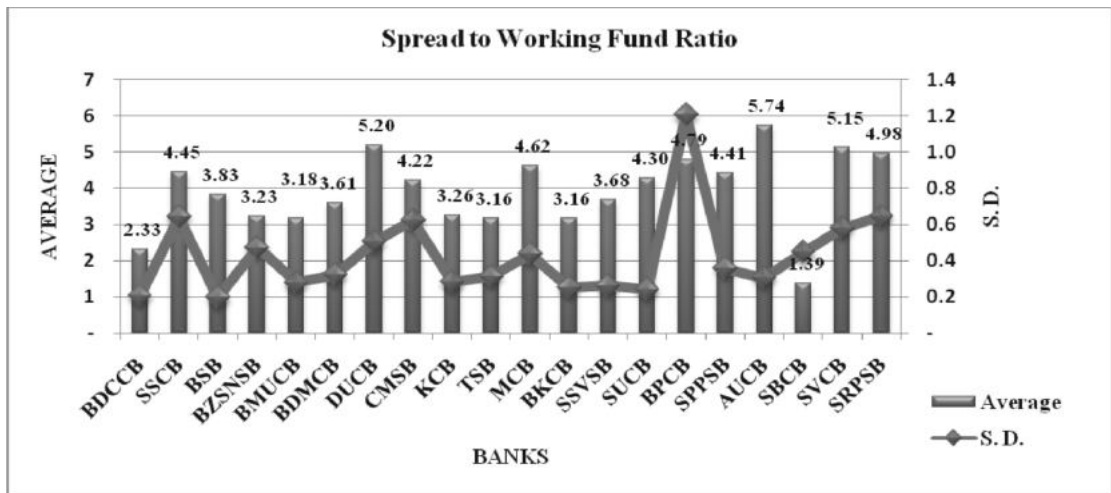


Table 9.3 portrays the amount available to the banks for meeting their administrative, operating and miscellaneous expenses. Spread shows the difference between interest earned and interest paid by the bank. The ratio of spread to working fund of the selected 20 co-operative banks for the present study period from 2008-09 to 2012-13 is presented in Table 9.3. The analysis of average rate for a period of 5 years reveals that the average rate is the highest (i.e. 5.74%) in the case of AUCB and DUCB (i.e. 5.20%) respectively. This indicates that AUCB and DUCB shows more money is available to the banks for meeting their administrative, operating and miscellaneous expenses and it is more enough available to meet the non-interest expenses and remaining part contributes to the profit during the study period if compared with other banks as far as the ratio of spread is concerned.

On the other hand, the analysis of consistency in performance with regard to excess income reveals that BSB has demonstrated the most consistent performance among all the selected banks by securing the least standard deviation (i.e. 0.20) which indicates the quantum of risk associated with spread of BSB.

### Anova Test

ANOVA test is employed to analyze the significant difference among the cooperative banks under the present study in respect of their spread ratio owing to the effect factors simultaneously. The following hypotheses are set:



**Null Hypothesis (H<sub>0</sub>):** “There is no significant difference among the cooperative banks in respect of their spread to their working fund ratio”

**Alternative Hypothesis (H<sub>a</sub>):** “There is a significant difference among the cooperative banks in respect of their spread to their working fund ratio”

The result of ANOVA Test at 5% (0.05) level of significance is portrayed in Table 9.3(a)

**Table 3(a)**  
**ANOVA Test for Spread to Working Fund Ratio**

	Sum of Squares	Df	Mean Square	F	Sig.
Between The Banks	1111.986	19	58.526	23.633	.000
Within Banks	328.389	80	4.105		
Total	1440.375	99			

*Source: Compiled from Table*

The analysis of ANOVA Test Table 9.3(a) reveals that the calculated F value is greater than table value, hence null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is a significant difference of spread to working fund ratio among the selected banks under study.

**Table 4**  
**Non Interest Income to Working Fund Ratio (in percentage)**

Banks	2008-09	2009-10	2010-11	2011-12	2012-13	Average	S. D.
BDCCB	0.11	0.11	0.07	0.14	0.14	0.11	0.03
SSCB	0.15	0.19	0.19	0.45	0.29	0.25	0.12
BSB	0.67	0.54	0.41	0.40	0.40	0.48	0.12
BZSNSB	0.15	0.45	0.24	0.17	0.21	0.24	0.12
BMUCB	0.11	0.11	0.15	0.22	0.28	0.17	0.07
BDMCB	0.11	0.25	0.15	0.17	0.20	0.18	0.05
DUCB	0.36	0.38	0.94	0.49	0.41	0.52	0.24
CMSB	0.26	0.38	0.27	0.25	0.37	0.31	0.06
KCB	0.33	0.20	0.23	0.20	0.21	0.23	0.06
TSB	0.23	0.13	0.15	0.18	0.18	0.17	0.04
MCB	0.15	0.13	0.12	0.14	0.18	0.14	0.02
BKCB	0.52	0.40	0.40	0.40	0.40	0.42	0.05
SSVSB	0.24	0.30	0.25	0.25	0.20	0.25	0.04
SUCB	0.83	0.20	0.39	0.26	0.17	0.37	0.27
BPCB	1.27	1.02	0.51	0.77	0.96	0.91	0.28
SPPSB	0.34	0.27	0.25	0.36	0.57	0.36	0.13
AUCB	0.39	0.31	0.43	1.05	0.51	0.54	0.30
SBCB	4.32	3.17	2.69	3.01	2.77	3.19	0.66
SVCB	0.41	0.46	0.71	0.58	0.56	0.54	0.12
SRPSB	0.58	0.63	0.72	0.83	0.85	0.72	0.12
Average	0.58	0.48	0.46	0.52	0.49	0.51	0.14

**SOURCE:** Computed from the published reports of the banks under study.

**Graph No: 4**

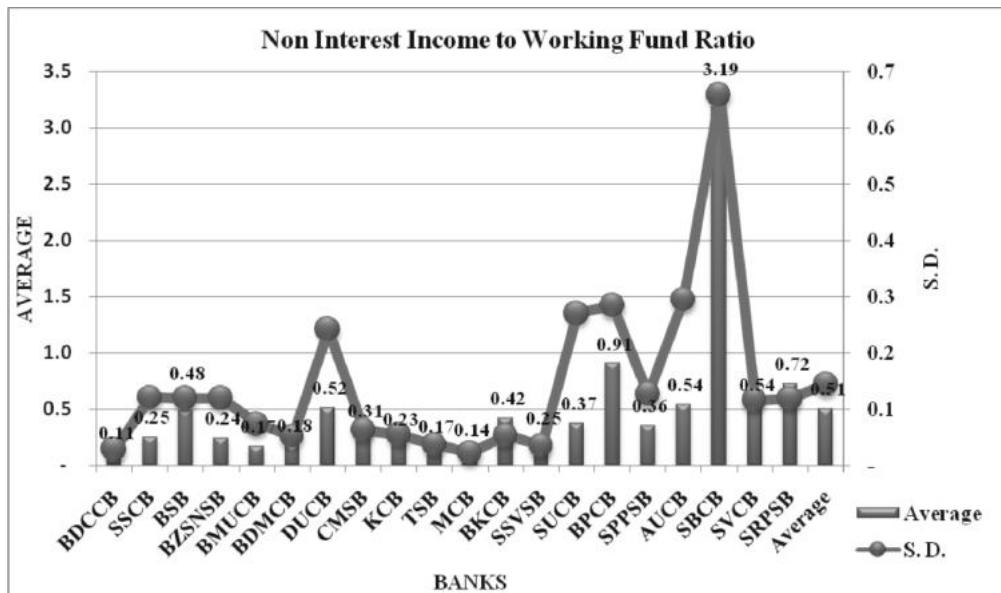


Table 9.4 depicts that the income from operations, other than lending of the total income. noninterest income to working fund ratio shows the bank's ability to earn from nonconventional sources. The ratio of non interest income to working fund of the selected 20 co-operative banks for the present study period from 2008-09 to 2012-13 is presented in table 9.4. The analysis of average rate for a period of 5 years reveals that the average rate is the highest (i.e. 3.19%) in the case of SBCB and BPCB (i.e. 0.91%) respectively. This indicates that SBCB and BPCB shows bank's ability to take full advantage of its operation freedom during the study period if compared with other banks as far as the ratio of non interest income is concerned.

On the other hand, the analysis of consistency in performance with regard to non interest income reveals that MCB has demonstrated the most consistent performance among all the selected banks by securing the least standard deviation (i.e. 0.02) which indicates the quantum of risk associated with non interest income of MCB.

### Anova Test

ANOVA test is employed to analyze the significant difference among the cooperative banks under the present study in respect of their non interest ratio income owing to the effect factors simultaneously. The following hypotheses are set:

**Null Hypothesis ( $H_0$ ):** “There is no significant difference among the cooperative banks in respect of their non interest income to their working fund ratio”

**Alternative Hypothesis ( $H_a$ ):** “There is a significant difference among the cooperative banks in respect of their non interest income to their working fund ratio”

The result of ANOVA Test at 5% (0.05) level of significance is portrayed in Table 9.4(a)

**Table 4(a)**  
**ANOVA Test for Non Interest Income to Working Fund Ratio**

	Sum of Squares	Df	Mean Square	F	Sig.
Between The Banks	41.991	19	2.210	52.394	.000
Within Banks	3.374	80	.042		
Total	45.365	99			

*Source: Compiled from Table*

he analysis of ANOVA Test Table 9.4(a) reveals that the calculated F value is greater than table value, hence null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is a significant difference of non interest income to working fund ratio among the selected banks under study

**Table 5**  
**Non Interest Expenditure to Working Fund Ratio (in percentage)**

Banks	2008-09	2009-10	2010-11	2011-12	2012-13	Average	S. D.
BDCCB	2.35	1.84	2.13	1.91	2.13	2.07	0.20
SSCB	3.27	3.39	3.81	3.82	3.76	3.61	0.26
BSB	4.17	4.00	3.32	3.19	3.23	3.58	0.47
BZSNSB	3.44	2.64	3.53	3.09	2.84	3.11	0.38
BMUCB	2.25	2.79	2.56	2.97	2.87	2.69	0.29
BDMCB	3.66	3.55	2.88	3.08	2.95	3.22	0.36
DUCB	4.51	5.69	5.33	5.06	3.70	4.86	0.78
CMSB	4.48	4.89	3.58	3.93	3.30	4.04	0.65
KCB	3.03	2.45	2.61	2.51	2.32	2.58	0.27
TSB	3.22	2.66	2.42	2.69	2.62	2.72	0.30
MCB	4.25	3.94	3.14	3.69	4.13	3.83	0.44
BKCB	3.31	3.20	2.56	2.63	2.69	2.88	0.35
SSVSB	3.18	2.92	3.09	2.64	2.97	2.96	0.21
SUCB	4.30	3.42	3.28	3.43	3.66	3.62	0.40
BPCB	6.25	5.28	4.48	3.31	3.89	4.64	1.16
SPPSB	4.45	3.79	3.63	3.49	3.93	3.86	0.37
AUCB	5.04	4.53	4.56	4.30	3.89	4.46	0.42
SBCB	3.71	3.44	3.14	3.31	3.83	3.49	0.28
SVCB	4.27	4.50	4.56	4.90	3.94	4.43	0.36
SRPSB	4.44	4.46	4.15	4.28	3.95	4.26	0.21
Average	3.88	3.67	3.44	3.41	3.33	3.55	0.41

**SOURCE:** Computed from the published reports of the banks under study.

**Graph No: 5**

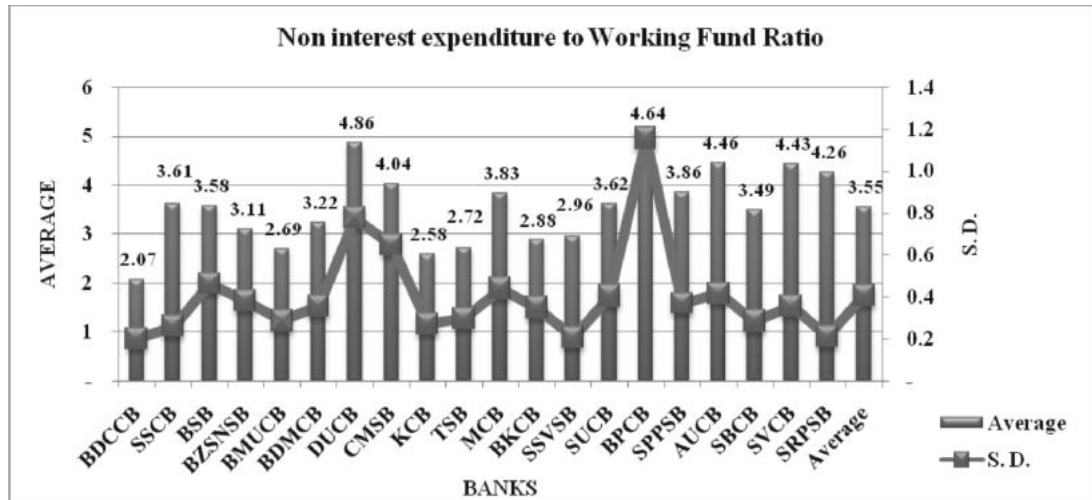


Table 9.5 depicts that the share of manpower expenses and other contingent expenses from the working fund. The ratio of non interest expenditure to working fund of the selected 20 co-operative banks for the present study period from 2008-09 to 2012-13 is presented in table 9.5. The Further, the analysis of average rate for a period of 5 years reveals that the average rate is the highest (i.e. 4.86%) in the case of DUCB and BPCB (i.e. 4.64%) respectively. This indicates that DUCB and BPCB shows bank's high expenditure on manpower and other contingent during the study period if compared with other banks as far as the ratio of non interest expenditure is concerned.

On the other hand, the analysis of consistency in performance with regard to non interest expenditure reveals that BDCCB has demonstrated the most consistent performance among all the selected banks by securing the least standard deviation (i.e. 0.20) which indicates the quantum of risk associated with non interest expenditure of BDCCB.

### Anova Test

ANOVA test is employed to analyze the significant difference among the cooperative banks under the present study in respect of their non interest ratio expenditure owing to the effect factors simultaneously. The following hypotheses are set:

**Null Hypothesis ( $H_0$ ):** “There is no significant difference among the cooperative banks in respect of their non interest expenditure to their working fund ratio”

**Alternative Hypothesis ( $H_a$ ):** “There is a significant difference among the cooperative banks in respect of their non interest expenditure to their working fund ratio”

The result of ANOVA Test at 5% (0.05) level of significance is portrayed in Table 9.5(a)

**Table 5(a)**  
**ANOVA Test for Non Interest Expenditure to Working Fund Ratio**

	Sum of Squares	Df	Mean Square	F	Sig.
Between The Banks	55.443	19	2.918	13.587	.000
Within Banks	17.181	80	.215		
Total	72.624	99			

*Source: Compiled from Table*

The analysis of ANOVA Test Table 9.5(a) reveals that the calculated F value is greater than table value, hence null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is a significant difference of non interest expenditure to working fund ratio among the selected banks under study.

**Table 6**  
**Burden to Working Fund Ratio (in percentage)**

<b>Banks</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>Average</b>	<b>S. D.</b>
BDCCB	2.24	1.73	2.06	1.77	2.00	<b>1.96</b>	<b>0.21</b>
SSCB	3.12	3.20	3.63	3.37	3.46	<b>3.36</b>	<b>0.20</b>
BSB	3.50	3.46	2.91	2.79	2.83	<b>3.10</b>	<b>0.35</b>
BZSNSB	3.29	2.19	3.29	2.92	2.63	<b>2.86</b>	<b>0.47</b>
BMUCB	2.14	2.68	2.41	2.76	2.59	<b>2.52</b>	<b>0.25</b>
BDMCB	3.55	3.31	2.73	2.91	2.75	<b>3.05</b>	<b>0.36</b>
DUCB	4.15	5.31	4.40	4.57	3.30	<b>4.35</b>	<b>0.73</b>
CMSB	4.22	4.51	3.31	3.68	2.93	<b>3.73</b>	<b>0.65</b>
KCB	2.70	2.25	2.38	2.31	2.11	<b>2.35</b>	<b>0.22</b>
TSB	2.99	2.53	2.26	2.51	2.44	<b>2.55</b>	<b>0.27</b>
MCB	4.10	3.81	3.03	3.55	3.95	<b>3.69</b>	<b>0.42</b>
BKCB	2.79	2.79	2.15	2.23	2.29	<b>2.45</b>	<b>0.31</b>
SSVSB	2.93	2.62	2.84	2.39	2.77	<b>2.71</b>	<b>0.21</b>
SUCB	3.47	3.22	2.89	3.17	3.49	<b>3.25</b>	<b>0.25</b>
BPCB	4.97	4.26	3.97	2.54	2.93	<b>3.73</b>	<b>0.99</b>
SPPSB	4.11	3.52	3.39	3.13	3.35	<b>3.50</b>	<b>0.37</b>
AUCB	4.65	4.22	4.13	3.25	3.38	<b>3.93</b>	<b>0.59</b>
SBCB	-0.61	0.27	0.45	0.30	1.07	<b>0.30</b>	<b>0.60</b>
SVCB	3.86	4.04	3.85	4.32	3.38	<b>3.89</b>	<b>0.34</b>
SRPSB	3.86	3.83	3.43	3.45	2.85	<b>3.48</b>	<b>0.41</b>
<b>Average</b>	<b>3.30</b>	<b>3.19</b>	<b>2.98</b>	<b>2.90</b>	<b>2.83</b>	<b>3.04</b>	<b>0.41</b>

**SOURCE:** *Computed from the published reports of the banks under study.*

**Graph No: 6**

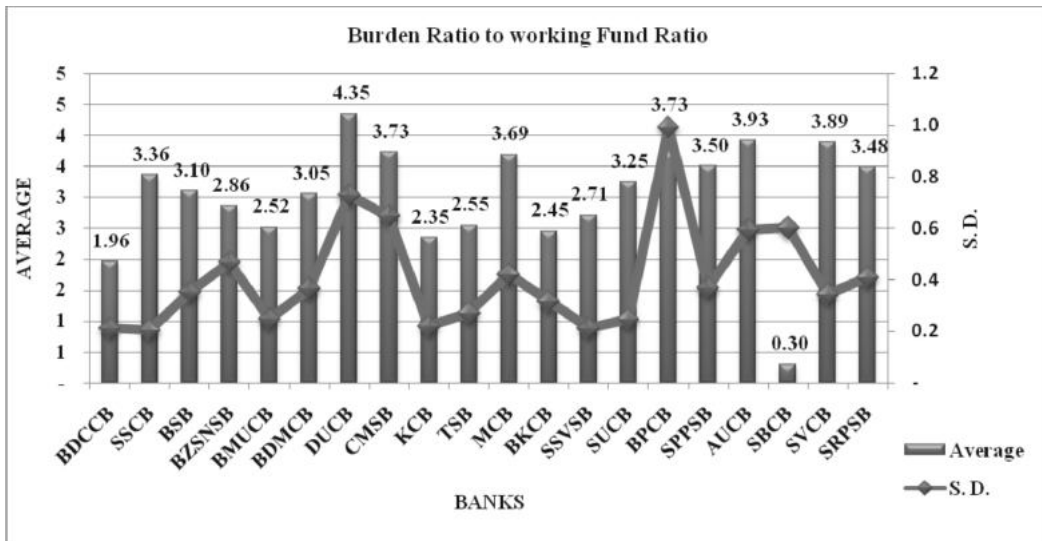


Table 9.6 portrays the difference between non-interest expenditure and non-interest income of a bank and it represents the tha amount of non-interest expenditure which is not covered by non-interest income of a bank. The ratio of burden to working fund of the selected 20 co-operative banks for the present study period from 2008-09 to 2012-13 is presented in table 9.6. The further, the analysis of average rate for a period of 5 years reveals that the average rate is the highest (i.e. 4.35%) in the case of DUCB and AUCB (i.e. 3.93%) respectively. This indicates that DUCB and AUCB shows non interest expenditure not covered by non-interest income during the study period if compared with other banks as far as the ratio of burden is concerned.

On the other hand, the analysis of consistency in performance with regard to burden reveals that SSCB has demonstrated the most consistent performance among all the selected banks by securing the least standard deviation (i.e. 0.20) which indicates the quantum of risk associated with burden of SSCB.

### Anova Test

ANOVA test is employed to analyze the significant difference among the cooperative banks under the present study in respect of their burden to work fund ratio owing to the effect factors simultaneously. The following hypotheses are set:

**Null Hypothesis ( $H_0$ ):** “There is no significant difference among the cooperative banks in respect of their burden to their the working fund ratio”

**Alternative Hypothesis (H<sub>a</sub>):** “There is a significant difference among the cooperative banks in respect of their burden to their working fund ratio”

The result of ANOVA Test at 5% (0.05) level of significance is portrayed in Table 5.6(a)

**Table 6(a)**  
**ANOVA Test for Burden to Working Fund Ratio**

	Sum of Squares	Df	Mean Square	F	Sig.
Between The Banks	76.623	19	4.033	19.269	.000
Within Banks	16.743	80	.209		
Total	93.366	99			

*Source: Compiled from Table*

The analysis of ANOVA Test Table 5.6(a) reveals that the calculated F value is greater than table value, hence null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is a significant difference of burden to working fund ratio among the selected banks under study.

**Table 7**  
**Net Profit to Working Fund Ratio (in percentage)**

Banks	2008-09	2009-10	2010-11	2011-12	2012-13	Average	S. D.
<b>BDCCB</b>	0.38	0.37	0.35	0.38	0.36	<b>0.37</b>	<b>0.01</b>
<b>SSCB</b>	0.24	1.28	1.16	1.67	1.15	<b>1.10</b>	<b>0.53</b>
<b>BSB</b>	0.46	0.39	0.70	0.85	1.25	<b>0.73</b>	<b>0.34</b>
<b>BZSNSB</b>	0.30	0.26	0.33	0.39	0.51	<b>0.36</b>	<b>0.10</b>
<b>BMUCB</b>	0.62	0.56	0.64	0.71	0.76	<b>0.66</b>	<b>0.08</b>
<b>BDMCB</b>	0.53	0.48	0.54	0.58	0.67	<b>0.56</b>	<b>0.07</b>
<b>DUCB</b>	0.74	0.71	0.70	0.71	1.43	<b>0.86</b>	<b>0.32</b>
<b>CMSB</b>	0.41	0.48	0.37	0.64	0.58	<b>0.50</b>	<b>0.11</b>
KCB	1.02	0.94	0.87	0.87	0.84	0.91	0.07
<b>TSB</b>	0.69	0.63	0.58	0.59	0.58	<b>0.61</b>	<b>0.05</b>
<b>MCB</b>	0.91	0.93	0.88	1.01	0.94	<b>0.93</b>	<b>0.05</b>
<b>BKCB</b>	0.47	0.76	0.76	0.79	0.77	<b>0.71</b>	<b>0.13</b>
<b>SSVSB</b>	1.06	0.95	1.00	0.93	0.92	<b>0.97</b>	<b>0.06</b>
<b>SUCB</b>	1.08	1.12	1.06	1.01	0.98	<b>1.05</b>	<b>0.06</b>
<b>BPCB</b>	1.10	1.42	1.07	0.64	1.02	<b>1.05</b>	<b>0.28</b>
<b>SPPSB</b>	0.89	0.92	0.94	0.91	0.92	<b>0.92</b>	<b>0.02</b>
<b>AUCB</b>	1.28	1.24	1.95	1.99	2.01	<b>1.69</b>	<b>0.40</b>
<b>SBCB</b>	1.45	0.92	1.03	1.05	1.00	<b>1.09</b>	<b>0.21</b>
<b>SVCB</b>	1.61	1.74	1.33	0.76	0.85	<b>1.26</b>	<b>0.44</b>
<b>SRPSB</b>	0.71	1.49	0.96	2.50	1.57	<b>1.45</b>	<b>0.69</b>
<b>Average</b>	<b>0.80</b>	<b>0.88</b>	<b>0.86</b>	<b>0.95</b>	<b>0.96</b>	<b>0.89</b>	<b>0.20</b>

**SOURCE:** Computed from the published reports of the banks under study.



Graph No: 7

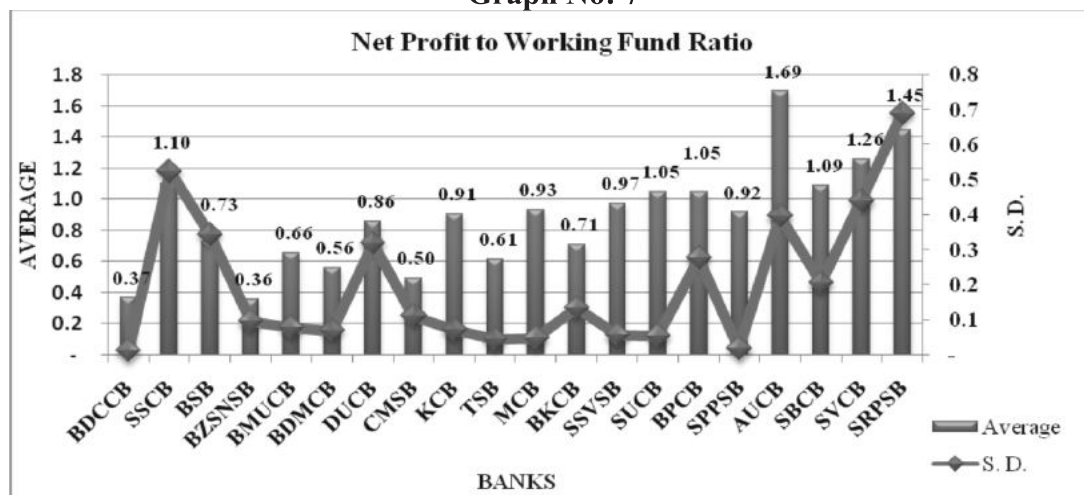


Table 9.7 portrays the overall profitability of the Co-operating Banks. The ratio of net profit to working fund of the selected 20 co-operative banks for the present study period from 2008-09 to 2012-13 is presented in Table 9.7. The analysis of average rate for a period of 5 years reveals that the average rate is the highest (i.e. 1.69%) in the case of AUCB and SRPSB (i.e. 1.45%) respectively. This indicates that AUCB and ARPSB indicates control of management on its operating cost or efficient utilization of funds during the study period if compared with other banks as far as the ratio of net profit is concerned.

On the other hand, the analysis of consistency in performance with regard to net profit reveals that BDCCB has demonstrated the most consistent performance among all the selected banks by securing the least standard deviation (i.e. 0.01) which indicates the quantum of risk associated with net profit of BDCCB.

### Anova Test

ANOVA test is employed to analyze the significant difference among the cooperative banks under the present study in respect of their net profit to work fund ratio owing to the effect factors simultaneously. The following hypotheses are set:

**Null Hypothesis ( $H_0$ ):** “There is no significant difference among the cooperative banks in respect of their net profit to their working fund ratio”

**Alternative Hypothesis ( $H_a$ ):** “There is a significant difference among the cooperative banks in respect of their net profit to their working fund ratio”

The result of ANOVA Test at 5% (0.05) level of significance is portrayed in table 9.7(a)

**Table 9.7(a)**  
**ANOVA Test for Net Profit to Working Fund Ratio**

	Sum of Squares	Df	Mean Square	F	Sig.
Between The Banks	11.223	19	.591	7.806	.000
Within Banks	6.054	80	.076		
Total	17.277	99			

*Source: Compiled from Table*

The analysis of ANOVA Test Table 9.7(a) reveals that the calculated F value is greater than table value, hence null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is a significant difference of net profit to working fund ratio among the selected banks under study

**Table 9.8**  
**Interest Income to Total Income Ratio (in percentage)**

<b>Banks</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>Average</b>	<b>S. D.</b>
BDCCB	98.41	98.51	98.91	98.18	98.31	<b>98.46</b>	<b>0.28</b>
SSCB	98.89	98.69	98.72	95.76	96.99	<b>97.81</b>	<b>1.38</b>
BSB	93.31	94.56	95.26	95.87	96.30	<b>95.06</b>	<b>1.18</b>
BZSNSB	98.58	95.55	97.78	98.33	98.08	<b>97.66</b>	<b>1.22</b>
BMUCB	98.76	98.74	98.40	97.84	97.03	<b>98.15</b>	<b>0.73</b>
BDMCB	98.95	97.41	98.48	98.23	98.04	<b>98.22</b>	<b>0.57</b>
DUCB	96.01	96.33	91.19	95.14	95.62	<b>94.86</b>	<b>2.10</b>
CMSB	97.54	96.81	97.08	97.50	96.34	<b>97.05</b>	<b>0.50</b>
KCB	96.43	97.62	97.54	97.93	97.84	<b>97.47</b>	<b>0.60</b>
TSB	97.62	98.62	98.36	98.20	98.25	<b>98.21</b>	<b>0.37</b>
MCB	98.49	98.62	98.58	98.54	98.33	<b>98.51</b>	<b>0.11</b>
BKCB	94.44	95.11	95.66	95.95	95.81	<b>95.39</b>	<b>0.62</b>
SSVSB	97.55	97.01	97.52	97.43	98.09	<b>97.52</b>	<b>0.39</b>
SUCB	92.86	98.04	95.89	97.35	98.27	<b>96.48</b>	<b>2.23</b>
BPCB	87.98	89.78	94.11	89.87	90.81	<b>90.51</b>	<b>2.26</b>
SPPSB	96.78	96.94	96.97	96.46	94.48	<b>96.33</b>	<b>1.05</b>
AUCB	96.39	97.18	96.12	91.53	95.28	<b>95.30</b>	<b>2.21</b>
SBCB	63.34	68.50	71.58	73.37	75.94	<b>70.55</b>	<b>4.85</b>
SVCB	96.74	96.36	94.09	94.95	94.65	<b>95.36</b>	<b>1.14</b>
SRPSB	93.81	93.71	92.32	92.73	91.75	<b>92.86</b>	<b>0.89</b>
<b>Average</b>	<b>94.64</b>	<b>95.20</b>	<b>95.23</b>	<b>95.06</b>	<b>95.31</b>	<b>95.09</b>	<b>1.23</b>

**SOURCE:** *Computed from the published reports of the banks under study.*

Graph No : 8

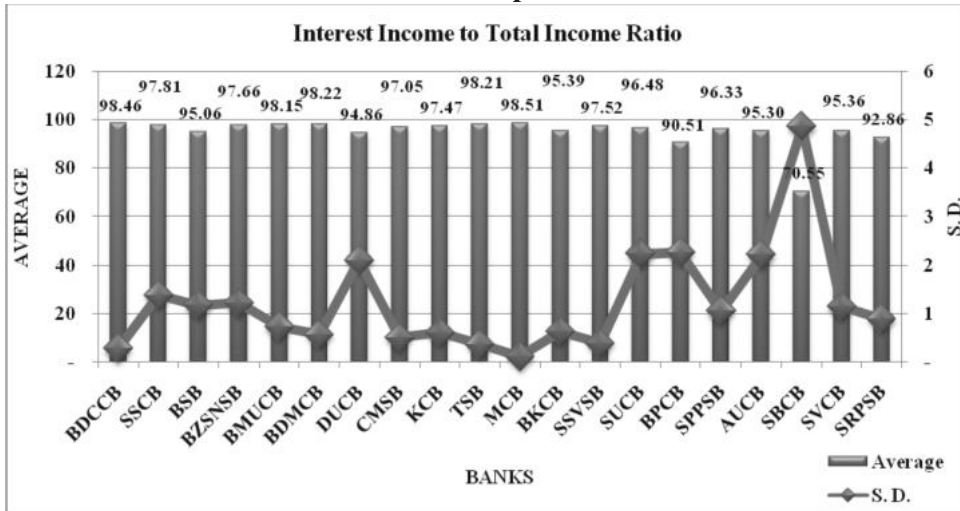


Table 9.8 portrays the proportionate contribution of interest income in total income. The ratio of interest income to total income of the selected 20 co-operative banks for the present study period from 2008-09 to 2012-13 is presented in table 9.8. The analysis of average rate for a period of 5 years reveals that the average rate is the highest (i.e. 98.51%) in the case of MCB and BDCCB (i.e. 98.46%) respectively. This indicates that MCB and BDCCB lends more money in the form of loans and advances to the borrowers and receive interest on it during the study period if compared with other banks as far as the ratio of interest income is concerned.

On the other hand, the analysis of consistency in performance with regard to net profit reveals that BDCCB has demonstrated the most consistent performance among all the selected banks by securing the least standard deviation (i.e. 0.01) which indicates the quantum of risk associated with net profit of BDCCB.

### Anova Test

ANOVA test is employed to analyze the significant difference among the cooperative banks under the present study in respect of their interest income to total income ratio owing to the effect factors simultaneously. The following hypotheses are set:

**Null Hypothesis ( $H_0$ ):** “There is no significant difference among the cooperative banks in respect of their interest income to their total income ratio”

**Alternative Hypothesis ( $H_a$ ):** “There is a significant difference among the cooperative banks in respect of their interest income to their total income ratio”

The result of ANOVA Test at 5% (0.05) level of significance is portrayed in Table 9.8(a)

**Table 8(a)**  
**ANOVA Test for Net Profit to Working Fund Ratio**

	Sum of Squares	df	Mean Square	F	Sig.
Between The Banks	3567.768	19	187.777	70.680	.000
Within Banks	212.537	80	2.657		
Total	3780.306	99			

*Source: Compiled from Table*

The analysis of ANOVA Test Table 9.8(a) reveals that the calculated F value is greater than table value, hence null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is a significant difference of interest income to total income ratio among the selected banks under study

**Table 9**  
**Interest Expenditure to Total Expenditure Ratio (in percentage)**

<b>Banks</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>Average</b>	<b>S. D.</b>
BDCCB	63.09	73.10	67.17	74.00	72.14	<b>69.90</b>	<b>4.63</b>
SSCB	75.47	74.20	71.40	57.59	56.27	<b>66.99</b>	<b>9.31</b>
BSB	56.29	58.15	58.45	63.76	66.14	<b>60.56</b>	<b>4.18</b>
BZSNSB	65.67	73.05	66.53	69.12	72.83	<b>69.44</b>	<b>3.44</b>
BMUCB	73.42	67.42	71.45	67.81	67.11	<b>69.44</b>	<b>2.83</b>
BDMCB	62.80	60.76	69.58	66.08	68.56	<b>65.56</b>	<b>3.74</b>
DUCB	45.92	41.29	46.40	46.52	52.83	<b>46.59</b>	<b>4.11</b>
CMSB	56.09	57.30	59.33	58.56	65.09	<b>59.27</b>	<b>3.48</b>
KCB	63.15	66.97	68.65	71.63	73.71	<b>68.82</b>	<b>4.11</b>
TSB	64.93	68.81	72.16	70.90	72.84	<b>69.93</b>	<b>3.19</b>
MCB	52.87	53.32	57.89	56.63	57.91	<b>55.72</b>	<b>2.46</b>
BKCB	62.99	57.39	70.13	70.96	69.42	<b>66.18</b>	<b>5.84</b>
SSVSB	64.43	67.44	65.33	69.72	68.45	<b>67.07</b>	<b>2.18</b>
SUCB	59.23	62.04	61.28	61.50	59.61	<b>60.73</b>	<b>1.24</b>
BPCB	34.12	38.20	40.46	52.20	58.62	<b>44.72</b>	<b>10.27</b>
SPPSB	54.17	51.85	49.92	62.48	58.53	<b>55.39</b>	<b>5.10</b>
AUCB	47.62	54.19	50.46	56.06	56.11	<b>52.89</b>	<b>3.73</b>
SBCB	64.09	62.36	62.76	67.68	63.48	<b>64.07</b>	<b>2.12</b>
SVCB	60.89	58.71	57.60	54.65	59.11	<b>58.19</b>	<b>2.31</b>
SRPSB	48.46	47.97	50.96	51.87	54.60	<b>50.77</b>	<b>2.70</b>
<b>Average</b>	<b>58.79</b>	<b>59.73</b>	<b>60.90</b>	<b>62.49</b>	<b>63.67</b>	<b>61.11</b>	<b>4.05</b>

**SOURCE:** *Computed from the published reports of the banks under study.*

Graph No: 9.9

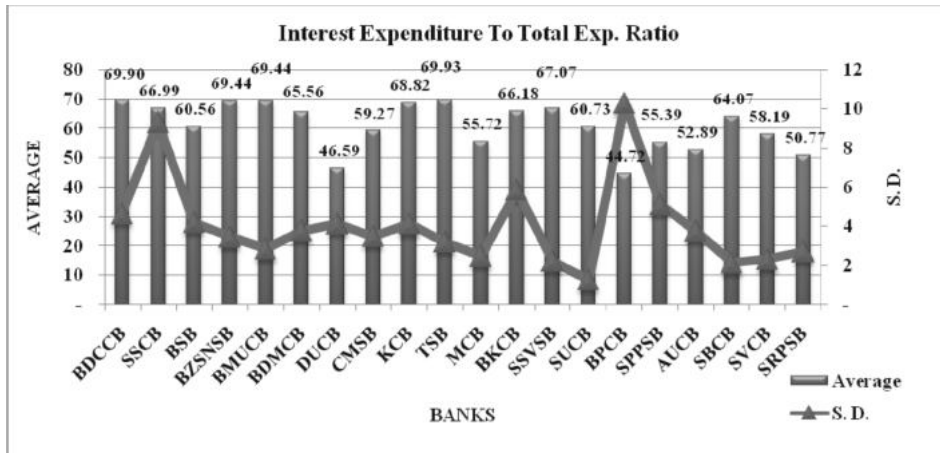


Table 9.9 reveals the expenses incurred on interest in proportion to total expenses. The ratio of interest expenditure to total expenditure of the selected 20 co-operative banks for the present study period from 2008-09 to 2012-13 is presented in table 9.9. The analysis of average rate for a period of 5 years reveals that the average rate is the highest (i.e. 69.93%) in the case of TSB and BDCCB (i.e. 69.90%) respectively. This indicates that TSB and BDCCB accepts deposits from savers and pay interest on these accounts during the study period if compared with other banks as far as the ratio of interest expenditure is concerned.

On the other hand, the analysis of consistency in performance with regard to interest expenditure reveals that SUCB has demonstrated the most consistent performance among all the selected banks by securing the least standard deviation (i.e. 1.24) which indicates the quantum of risk associated with net profit of SUCB.

### Anova Test

ANOVA test is employed to analyze the significant difference among the cooperative banks under the present study in respect of their interest expenditure to total expenditure ratio owing to the effect factors simultaneously. The following hypotheses are set:

**Null Hypothesis ( $H_0$ ):** “There is no significant difference among the cooperative banks in respect of their interest expenditure to their total expenditure ratio”

**Alternative Hypothesis ( $H_a$ ):** “There is a significant difference among the cooperative banks in respect of their interest expenditure to their total expenditure ratio”

The result of ANOVA Test at 5% (0.05) level of significance is portrayed in table 9.9(a)

**Table 9(a)**  
**ANOVA Test for Interest expenditure to Total Expenditure Ratio**

	Sum of Squares	Df	Mean Square	F	Sig.
Between The Banks	6027.906	19	317.258	14.948	.000
Within Banks	1697.977	80	21.225		
Total	7725.883	99			

*Source: Compiled from Table*

The analysis of ANOVA Test Table 9.9(a) reveals that the calculated F value is greater than table value, hence null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is a significant difference of interest expenditure to total expenditure ratio among the selected banks under study.

**Table 10**  
**Return on Capital Employed Ratio (in percentage)**

<b>Banks</b>	<b>2008-09</b>	<b>2009-10</b>	<b>2010-11</b>	<b>2011-12</b>	<b>2012-13</b>	<b>Average</b>	<b>S. D.</b>
BDCCB	0.80	0.63	0.65	0.75	0.71	<b>0.71</b>	<b>0.07</b>
SSCB	0.29	1.58	1.51	2.19	1.65	<b>1.44</b>	<b>0.70</b>
BSB	0.53	0.51	1.00	1.05	1.54	<b>0.93</b>	<b>0.43</b>
BZSNSB	0.34	0.30	0.38	0.44	0.56	<b>0.40</b>	<b>0.10</b>
BMUCB	0.77	0.70	0.80	0.90	0.99	<b>0.83</b>	<b>0.11</b>
BDMCB	0.64	0.59	0.65	0.71	0.80	<b>0.68</b>	<b>0.08</b>
DUCB	1.08	1.05	1.17	1.27	2.91	<b>1.50</b>	<b>0.80</b>
CMSB	0.49	0.54	0.47	0.83	0.71	<b>0.61</b>	<b>0.16</b>
KCB	1.25	1.33	1.11	1.07	1.03	<b>1.16</b>	<b>0.13</b>
TSB	0.79	0.80	0.67	0.67	0.66	<b>0.72</b>	<b>0.07</b>
MCB	1.16	1.17	1.17	1.29	1.18	<b>1.19</b>	<b>0.05</b>
BKCB	0.56	0.92	0.94	1.01	0.96	<b>0.88</b>	<b>0.18</b>
SSVSB	1.25	1.09	1.20	1.08	1.06	<b>1.14</b>	<b>0.08</b>
SUCB	1.35	1.49	1.44	1.45	1.42	<b>1.43</b>	<b>0.05</b>
BPCB	1.68	1.89	1.37	1.03	1.49	<b>1.49</b>	<b>0.32</b>
SPPSB	1.16	1.17	1.10	1.02	0.99	<b>1.09</b>	<b>0.08</b>
AUCB	1.64	1.52	2.47	2.51	2.91	<b>2.21</b>	<b>0.60</b>
SBCB	1.73	1.07	1.29	1.23	1.17	<b>1.30</b>	<b>0.25</b>
SVCB	2.00	2.03	1.59	0.93	1.06	<b>1.52</b>	<b>0.51</b>
SRPSB	1.06	2.18	1.37	3.59	2.22	<b>2.08</b>	<b>0.98</b>
<b>Average</b>	<b>1.03</b>	<b>1.13</b>	<b>1.12</b>	<b>1.25</b>	<b>1.30</b>	<b>1.17</b>	<b>0.29</b>

***SOURCE:*** *Computed from the published reports of the banks under study.*



**Graph No:10**

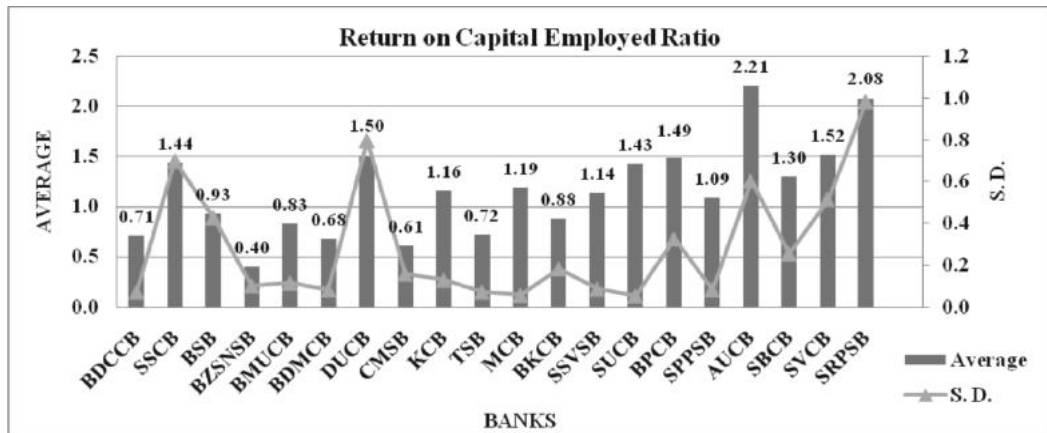


Table 9.10 indicates the earning power of the bank on each rupee invested. The ratio of return on capital of the selected 20 co-operative banks for the present study period from 2008-09 to 2012-13 is presented in Table 9.10. The analysis of average rate for a period of 5 years reveals that the average rate is the highest (i.e. 2.21%) in the case of AUCB and SRPSB (i.e. 2.08%) respectively. This indicates that AUCB and SRPSB are more efficiency of the management in utilizing funds entrusted to them and better is the financial position of bank during the study period if compared with other banks as far as the ratio of return on capital is concerned.

On the other hand, the analysis of consistency in performance with regard to return on reveals that capital employed SUCB has demonstrated the most consistent performance among all the selected banks by securing the least standard deviation (i.e. 0.05) which indicates the quantum of risk associated with return on capital employed of SUCB.

### Anova Test

ANOVA test is employed to analyze the significant difference among the cooperative banks under the present study in respect of their return on capital employed ratio owing to the effect factors simultaneously. The following hypotheses are set:

**Null Hypothesis ( $H_0$ ):** “There is no significant difference among the cooperative banks in respect of their return on their capital employed ratio”

**Alternative Hypothesis ( $H_a$ ):** “There is a significant difference among the cooperative banks in respect of their return on their capital employed ratio”

The result of ANOVA Test at 5% (0.05) level of significance is portrayed in table 9.10(a)



**Table 10(a)**  
**ANOVA Test for Return on Capital Employed Ratio**

	Sum of Squares	Df	Mean Square	F	Sig.
Between The Banks	21.198	19	1.116	6.985	.000
Within Banks	12.777	80	.160		
Total	33.975	99			

*Source: Compiled from Table*

The analysis of ANOVA Test Table 9.10(a) reveals that the calculated F value is greater than table value, hence null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is a significant difference of return on capital employed ratio among the selected capital employed under study.

## Findings

**The Interest Income to Working Fund** shows the relation between interest's income and working funds. It reflects the profitability of a unit to large extent. The ratio revealed the following observation.

This ratio indicates the effectiveness of utilization of deposits. It recorded a fluctuating trend in all the bank units during the study period. It was highest in SSCB i.e., 12.33% and lowest in BDCCB i.e., 7.20%. This indicates that SSCB fared well during the study period and BDCCB marks the failure of Co-operative Banks in optimum utilization of funds.

**The Interest Paid to Total Fund Ratio** in all co-operative banks fluctuating during the 5 years of the study period. The average ratio was the lowest in BPCB i.e. 3.73% and it was followed by DUCB i.e. 4.20% which indicates efficiency of bank in obtaining low cost deposits but unwillingness investments by the investors. The maximum average ratio is in the case of SSCB i.e. 7.88 per cent followed by BZSNSB i.e. 7.06 per cent which indicates inefficiency of management in obtaining low cost deposits during the study period

**Spread** plays an important role in determining the profitability of banks. It is the amount available to the banks for meeting their administrative, operating and miscellaneous

expenses The maximum average ratio is in the case of AUCB *i.e.* 5.74 per cent followed by DUCB *i.e.* 5.20 per cent. This indicates that AUCB and DUCB shows more money is available to the banks for meeting their administrative, operating and miscellaneous expenses and it is more enough available to meet the non-interest expenses and remaining part contributes to the profit during the study period if compared with other banks as far as the ratio of spread is concerned vice-versa for SBCB & BDCCB.

**Non Interest Income to Working Fund Ratio** measures the income from operations, other than lending of the total income The maximum average ratio is in the case of SBCB *i.e.* 3.19 per cent followed by BPCB *i.e.* 0.91 per cent which shows the operational efficiency of a bank will be high, while the ratio was minimum for BDCCB *i.e.* 0.11 per cent followed by MCB *i.e.* 0.14 per cent which indicates the operational efficiency is low.

**Non-Interest Expenditure to Working Funds Ratio** represents the share of manpower expenses and other contingent expenses from the working fund.

The analysis of ANOVA Test Table reveals that the calculated F value is greater than table value, hence null hypothesis is rejected and alternative hypothesis is accepted. It can be concluded that there is The maximum average ratio is in the case of DUCB *i.e.* 4.86 per cent followed by BPCB *i.e.* 4.64 per cent, shows bank's high expenditure on manpower and other contingent during the study period while the ratio was minimum for BDCCB *i.e.* 2.07 per cent followed by KCB *i.e.* 2.58 per cent.

**Burden** represents the amounts of non-interest expenditure, which is not covered by non-interest income of a bank. The maximum average ratio is in the case of DUCB *i.e.* 4.35 per cent followed by AUCB *i.e.* 3.93 per cent, which indicates the lower profitability while the ratio was minimum for SBCB *i.e.* 0.30 per cent followed by BDCCB *i.e.* 1.96 per cent which indicates higher profitability of the banks.

**Net Profit to Working Fund Ratio** measures overall profitability of the Co-operating Banks. The maximum average ratio is in the case of AUCB *i.e.* 1.69 per cent followed by SRPSB *i.e.* 1.45 per cent, indicate control of management on its operating cost or efficient utilization of funds. While the ratio was minimum for BZSNSB *i.e.* 0.36 per cent followed by BDCCB *i.e.* 0.37 per cent.

**Interest Income to Total Income Ratio** shows the proportionate contribution of interest income in total income. The maximum average ratio is in the case of MCB *i.e.* 98.51 per cent followed by BDCCB *i.e.* 98.46 per cent. This indicates that MCB and BDCCB lends more money in the form of loans and advances to the borrowers and receive interest on it during the study period while the ratio was minimum for SBCB *i.e.* 70.55 per cent followed by BPCB *i.e.* 90.51 per cent.

**Interest Expenditure to Total Expenditure Ratio** reveals the expenses incurred on interest in proportion to total expenses. Banks accepts deposits from savers and pay interest on these accounts The maximum average ratio is in the case of TSB *i.e.* 69.93 per cent followed by BDCCB *i.e.* 69.90 per cent, while the ratio was minimum for BPCB *i.e.* 44.72 per cent followed by DUCB *i.e.* 46.59 per.

**Return on Capital Employed Ratio** expresses profitability on overall investment viz. total resources utilized by the bank. The maximum average ratio is in the case of AUCB *i.e.* 2.21 per cent followed by SRPSB *i.e.* 2.08 per cent. This indicates that AUCB and SRPSB are more efficiency of the management in utilizing funds entrusted to them and better is the financial position of bank during the study period while the ratio was minimum for BZSNSB *i.e.* 0.40 per cent followed by CMSB *i.e.* 0.61 per.

## Suggestions

### I. Profitability Ratios

1. The BDCCB advised to increase the interest earned ratio to utilize its funds properly and should have a strong policy of advancing loans.
2. The maximum average interest paid ratio is in the case of SSCB *i.e.* 7.88 per cent followed by BZSNSB *i.e.* 7.06 per cent. These banks should take steps to increase efficiency of management in obtaining low cost deposits during the study period.
3. In the case spread, except AUCB, DUCB & SVCB all other banks have to put the step forward to increase in the forthcoming years. The spread is found to be in the range of 1.40 to 5, which has to be increased above 5.
4. In case of non interest income ratio the BDCCB is having lowest ratio so, it is advised to invest more in securities and bonds where they can get non interest income.
5. The maximum average non interest expenditure ratio is in the case of DUCB *i.e.* 4.86 per cent and it has to reduce its expenditure on manpower and other contingent during

the study period.

6. The DUCB is having maximum average burden ratio which indicated lower profitability and it has to take necessary steps to reduce the ratio.
7. The BDCCB and BZSNSB are advised to control its management and other operating expenses to increase net profit to working fund ratio.
8. The BZSNB and CMSB both bank have over capitalized as compared to other banks so it advised to use that total fund in a proper way to get better return on investment.

## **Conclusion**

Economic development of any country is mainly influenced by the growth of the banking industry in that country. The present study has been conducted to examine the financial performance of all the co-operative banks of Bijapur district, Karnataka using profitability ratios, liquidity & solvency ratios, bank financial efficiency ratios and productivity ratios. The profitability ratios indicated that Interest Income, Interest Expended, Spread, Non-Interest Income, Non Interest Expenditure, Burden, Net Profit & Return on Capital Employed proved the financial soundness of SSCB, BPCB, AUCB and MCB. But after monitoring the changes in these profitability ratios, it is clear that the banks have to improve its operational strategy; only then it will be able to attract more customers and investors. For sound financial health, banks need to put in more effort to be efficient in generating greater profits per rupee of sale. On the practical dimension, this study is helpful for bankers and managers in their decision making to improve the financial performance and formulate policies that will promote effective financial system. The study also recommends measures that could be adopted by banks to ensure soundness in their operations. The impact of the four ratios has a significant difference between all the co-operative banks of Bijapur district, Karnataka. The future of cooperative banks is challenging because of the competition from public sector banks and private sector banks. Public sector banks and private sector banks are concentrating on their major expansion activities both vertically and horizontally. The growth of co-operative banks depends on transparency in control and operation, governance, customer-centric policies, technology-up gradation and efficiency.

It can be concluded from the analysis that the adoption of modern technology, banking reforms and recovery mechanism greatly aided in improving the performance of the bank.

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