

CHAPTER 5

ASSET QUALITY

5.1 INTRODUCTION

Loans and advances are the major and important part of a bank's assets portfolio. Asset portfolio of every bank indicates the pattern of employment of funds in it. The interest earned from loans and advances is the major source of income of a bank (Padmalatha and Suresh, 2010). Loans and advances by a bank may be grouped into the following three categories:

- Agricultural loans
- Industrial loans
- Retail loans

Loans always bear great credit risk which may arise due to default by the borrower on account of repayment. Banks should manage their loan portfolio in profitable and safe manner. In considering the loan proposal sound principles of lending should be followed. "The principles to be followed by bank for its lending policy should be Safety, Liquidity and Profitability" (Clifford, 2011).

The success of cooperative banks depends upon the timely recovery of loans. The central cooperative banks have developed an in-built system for movement of funds. The flow of credit is such that if 'advancement- recovery-advancement' cycle is broken anywhere in between, the whole system gets disturbed. Financing, particularly, crop loaning has a unique revolving nature i.e. major amount of credit for the next crop period is disbursed out of the recovery of loans advanced in previous crop season. "Despite of best efforts of a bank, there is always some percentage of loans that become bad debts (Waraich and Dhawan, 2014)". "It has negative effect on the profitability and operations of a bank. So the main aim of banks should be to keep these loan losses at minimum possible level (Bhatia, et. al., 2013)". Timely recovery of loans is a basic factor for the success of cooperative banks' loaning programme and it affects the quality of assets of a bank.

"Bank asset quality not only affects the financial and operating performance of the bank itself, but also further impinges on the soundness of the national financial system" (Chisti, 2012). In India, RBI had implemented the prudential norms for improving the financial health of banks and the quality of their loan portfolio on the suggestions of Narasimham Committee.

As per prudential norms, “The classification of assets of banks has to be done on the basis of objective criteria which would ensure a uniform and consistent application of the norms. Banks are urged to ensure that while granting loans and advances, realistic repayment schedules may be fixed on the basis of cash flows with borrowers (RBI circular DBOD.No.BP.BC.9/21.04.048/2014-15)”.

Adoption of prudential norms helps to get prompt payment from borrower and chances of non payment may reduce. Banks have been further directed to create provisions at prescribed rates on default amount according to degree of default. “The provisioning should be made on the basis of the classification of assets based on the period for which the asset has remained non-performing and the availability of security and the realisable value (RBI Master circular of prudential norms DBR.No.BP.BC.2/21.04.048/2015-16)”.

5.2 CLASSIFICATION OF LOANS AND ADVANCES

“Commercial and cooperative banks are required to assess their entire loans and advances portfolio on an account-by-account basis and classify them into performing assets (PA) and non performing assets (NPAs)” (Kumar, 2008). Loans and advances of both commercial and cooperative banks are classified into two main categories:

- **PERFORMING ASSETS (PA)**

These loans accounts are also termed as standard loans. These loan assets do not cause any problem in the recovery of loans and account holders are regular in making the payment of principal and interest. These loan assets are attached with not more than normal risk of business. Banks generate regular income from these performing loans.

- **NON PERFORMING ASSETS (NPAs).**

As per RBI guidelines on asset classification, “A non performing asset is a credit facility in respect of which the interest and or principal amount have remained outstanding for one quarter or more”. A non-performing asset (NPA) is defined generally as a credit facility where

- ‘Interest and / or installment of principal remain overdue for more than 90 days in respect of a term-loan’.
- ‘The account remains `out of order' for more than 90 days, in respect of overdraft/ cash credit (OD/ CC)’.

- ‘The bill remains overdue for more than 90 days in the case of bill purchased and discounted’.
- ‘Interest and/or instalment of principal remains overdue for two harvest seasons, but for a period not exceeding two half years in the case of an advance granted for agricultural purposes’.
- ‘Any amount to be received remains overdue for more than 90 days in respect of other accounts’.

In case of ‘agricultural advances’, an advance is to be treated as NPA, if

- ‘A loan granted for short duration crops will be treated as NPA if the instalment of the principal or interest thereon remains unpaid for two crop seasons beyond the due date’.
- ‘A loan granted for long duration crops will be treated as NPA, if the instalment of principal or interest thereon remains unpaid for one crop season beyond the due date’.

The ‘non performing assets’ (NPAs) of banks are further classified in the following categories.

- **SUB-STANDARD ASSETS**

“In commercial banks, with effect from March 31, 2005, a sub-standard asset is one which has remained NPA for a period less than or equal to 12 months (RBI circular DBOD.No.BP.BC.9/21.04.048/2014-15)”.

“In case of sub-standard assets, the current net worth of the borrower/guarantor or the current market value of the security charged is not enough to ensure recovery of the dues to the banks in full. In other words, such assets will have defined credit weaknesses that jeopardize the liquidation of the debt and are characterized by the distinct possibility that banks will sustain some loss if deficiencies are not corrected (Master circular of RBI on prudential norms DBR.No.BP.BC.2/21.04.048/2015-16)”.

- **DOUBTFUL ASSETS**

“Doubtful assets are those assets that have remained non performing for more than 12 months” (Sangmi and Nazir, 2010).

- **LOSS ASSETS**

“An asset which is acknowledged as loss by the bank or internal or external auditors or by the RBI inspectors but the amount has not been written off wholly by

the bank. These assets are complete loss for the banks”. These assets are not worth of recording in the books.

As per prudential norms on asset classification given by RBI, “In cooperative banks, such loss assets include overdue loans in cases:

- Where decrees or execution petitions have been time barred or documents are lost or no other legal proof is available to claim the debt,
- Where members or their sureties are declared insolvent or have died leaving no tangible assets,
- Where members have left the area of operation of the society, SCB or CCB leaving no property and their sureties have no means to pay the dues,
- Where the loan is fictitious or when gross misutilisation is noticed and
- Amount which cannot be recovered in case of liquidated societies.”

In banks, proper system relating to identification of NPA accounts should be implemented so that loss can be prevented by taking appropriate actions. But in some circumstances, some NPA accounts should be directly considered as ‘doubtful or loss asset’ like in case of fraud committed by borrower or decline in the value of security etc.

5.3 PROVISIONS FOR VARIOUS CATEGORIES OF ASSETS

“The asset quality of a banking system is primarily assessed on the basis of its ability to recover the outstanding loans and advances made in the due time” (Kabir and Dey, 2012). The asset quality appraisal of banks deals with evaluating credit risks associated with the bank’s asset portfolios. Asset quality reflects the ability of the bank to identify credit risk attached with the assets. It will help the banks to identify and regulate non performing assets. ‘Non performing assets’ do not generate any income but adversely affects the profitability of a bank. Therefore, there is a need to create provisions to absorb the losses on account of non payment of loans. Provisions are to be maintained by taking into account the attrition in the value of security given to the banks over a period of time.

In banks, provisions are created according to classification of assets into different types such as ‘standard, sub-standard, doubtful and loss assets’. “The primary responsibility for making adequate provisions for any diminution in the value of loan assets is that of the bank management and the statutory auditors” (Pathak, 2011). “Taking into account the time lag between an account becoming doubtful of

recovery, its recognition as such, the realization of the security and the erosion over time in the value of the security charged to the bank, the banks should make provisions against sub-standard, doubtful assets and loss assets (RBI circular DBOD.No. BP.BC. 9/21. 04.048/2014-15)".

The provisions to be calculated on the basis of different assets are as below:

5.3.1 PROVISIONS FOR STANDARD ASSET

"Banks are required to make provision on standard assets for agricultural and SME sectors at a minimum of 0.25 percent of the total outstanding in this category and for all other standard assets, they have to make a general provision at a minimum of 0.40 per cent. The advances granted against term deposits, National Savings Certificate (NSC) eligible for surrender, Kisan Vikas Patra (KVP), Indira Vikas Patra (IVP), life policies, staff loans would attract provision of 0.25% prescribed for standard assets. The provision towards standard assets need not be netted from gross advances and should be shown separately as 'contingent provision against standard assets' under 'other liabilities and provisions – others' and are eligible for inclusion in calculation of tier II capital (RBI circular DBR.No.BP.BC.2/21.04.048/2015-16)".

5.3.2 PROVISIONS FOR SUB-STANDARD ASSET

"In sub standard assets, banks create a provision of 10% of total outstanding loans and advances".

5.3.3 DOUBTFUL ASSETS

Period for which Advance remained Doubtful	Provision (%)
• Upto one year	20
• One to three years	30
• More than 3 years	100

Source: RBI master circular 'DBOD.No.BP.BC.9/21.04.048/2014-15- Prudential Norms on Income Recognition, Asset Classification and Provisioning'.

5.3.4 PROVISIONS FOR LOSS ASSET

"The entire loss asset should be written off. If the assets are permitted to be retained in the books for any reasons then 100% of the outstanding advances should be fully provided (RBI circular DBOD.No.BP.BC.9/21.04.048/2014-15)".

5.4 ASSET QUALITY IN SELECTED DISTRICT CENTRAL COOPERATIVE BANKS OF PUNJAB

The 'Basel Committee on Banking Supervision' in 1997 issued an important document, 'Core Principles for Effective Banking Supervision'. Out of total issued discussed in that document, one fourth are planned for the bank asset quality or credit risk management. "It reflects that asset quality is a universal concern for the financial supervisory authorities in every country throughout the world" (Chisti, 2012).

In this chapter, an attempt has been made to analyse the asset quality of 20 district central cooperative banks of Punjab with the help of following ratios.

- 'Gross NPAs to Total Advances Ratio
- Net NPAs to Net Advances Ratio
- Substandard Assets to Total Advances Ratio
- Doubtful Assets to Total Advances Ratio
- Loss Assets to Total Assets Ratio
- Earning Assets to Total Assets Ratio'

5.4.1 TRENDS IN GROSS NPAS TO GROSS ADVANCES RATIO OF DCCBs IN PUNJAB

'Gross NPAs to Gross Advances Ratio' shows the percentage of gross advances of a bank that are non performing assets of a bank. Perusal of table 5.1 shows that out of twenty DCCBs, 7 DCCBs had less than 5 percent gross NPAs to gross advances ratio but five DCCBs i.e. Amritsar, Mansa, Gurdaspur, SAS Nagar and Tarn Taran DCCB had more than 8 percent. Two banks Fazilka and Mansa DCCBs had positive compounded annual growth rate which is a matter of serious concern for these banks.

Perusal of table 5.1 indicates that Nawanshahar DCCB ranked first with lowest mean of gross NPAs to gross advances ratio of 3.29 percent only. This DCCB had publicized significant declining trend in the ratio with compounded annual decline at the rate of 7.95 percent. In 2005-06, the ratio was 5.09 percent which declined to 3 percent in 2008-09. In 2009-10 an increase in the ratio was witnessed and the ratio was 3.58 percent, thereafter decrease in the ratio was observed and it came down to 2.41 percent in the year 2012-13. On the basis of trend coefficients shown during the period of study, it was estimated that this ratio would come down to 1.13 percent in the year 2016-17 and 0.27 percent in the year 2019-20.

Table 5.1 Trends in Gross NPAs to Gross Advances Ratio (percentage) of DCCBs in Punjab

As on 31st March->	2006	2007	2008	2009	2010	2011	2012	2013	Mean	CAGR	t- value	Future Trend	Rank	
	2006	2007	2008	2009	2010	2011	2012	2013						
Amritsar	17.12	16.20	15.98	16.76	13.61	12.15	9.40	8.00	13.65	-10.24	-6.53*	4	0	19
Bathinda	3.75	3.91	4.62	6.47	5.93	4.58	3.87	2.78	4.49	-2.64	-0.46*	4	4	5
Faridkot	7.87	6.54	7.27	6.37	4.77	3.77	4.29	3.15	5.50	-12.03	-7.26*	0	-2	9
Fatehgarh Sahib	7.30	7.60	6.20	6.50	4.96	4.69	4.12	3.76	5.64	-9.96	-9.12*	1	0	10
Fazilka	5.26	4.96	4.91	5.17	4.75	5.41	6.44	4.40	5.16	0.30	0.29*	5	5	8
Ferozepur	6.72	5.52	4.78	5.58	4.11	3.84	4.59	2.96	4.76	-8.69	-4.46*	2	0	7
Gurdaspur	21.36	16.90	13.91	14.90	19.50	15.11	13.18	11.68	15.82	-5.72	-2.39*	9	6	20
Hoshiarpur	8.63	8.81	5.95	5.23	6.17	5.39	4.58	4.65	6.18	-8.80	-4.36*	2	0	13
Jalandhar	5.94	4.82	3.12	3.87	3.81	3.18	2.86	2.92	3.82	-8.58	-3.70*	1	0	3
Kapurthala	4.98	4.86	4.05	4.23	3.28	2.64	2.37	2.51	3.61	-11.15	-8.85*	0	-1	2
Ludhiana	9.05	7.38	6.96	6.90	5.50	4.88	3.67	3.66	6.00	-12.40	-11.87*	0	-2	12
Mansa	10.67	8.57	7.95	8.45	13.95	11.91	7.79	9.02	9.79	0.07	0.06*	10	10	18
Moga	5.93	5.09	4.65	4.53	4.32	4.11	3.46	2.90	4.38	-8.39	-10.40*	2	0	4
Muktsar	7.57	6.20	6.69	7.78	6.75	5.97	6.93	5.33	6.65	-2.80	-1.60*	5	5	14
Nawanshahar	5.09	3.85	2.88	3.00	3.58	2.99	2.57	2.41	3.29	-7.95	-3.44*	1	0	1
Patiala	8.24	6.78	6.25	7.25	5.61	4.75	4.36	4.01	5.90	-9.43	-6.53*	2	0	11
Ropar	6.94	8.10	7.19	9.85	8.34	6.96	5.60	4.99	7.25	-5.11	-1.55*	5	4	15
Sangrur	4.98	5.25	5.22	5.46	5.15	4.41	3.75	3.68	4.74	-5.06	-3.33*	3	2	6
SAS Nagar	NA	8.96	8.18	9.75	8.67	8.32	7.89	7.12	8.41	-3.24	-2.17*	7	6	16
Tarn Taran	11.28	11.03	9.54	9.50	8.82	8.10	7.33	6.55	9.02	-7.34	-16.52*	4	2	17

Source: Calculated from annual reports of various DCCBs *Significant at 5%

Kapurthala DCCB followed Nawanshahar DCCB with mean gross NPAs to gross advances ratio of 3.61 percent. This DCCB had shown significant decline in the ratio at a rate of 11.15 percent compounded annually. In the initial year of study i.e. 2005-06, this ratio was 4.98 percent which decreased to 4.05 percent in the year 2007-08. In 2008-09, this ratio showed sudden increase and was 4.23 percent and thereafter declined to 2.37 percent in the year 2011-12. The ratio witnessed an increase in the last year of study i.e. 2012-13 and was found to be 2.51 percent. If the same pattern of trend continues then it may be predicted that future value of ratio would come down to 0.49 percent and -0.75 percent in the year 2016-17 and 2019-20 respectively.

Table 5.1 reveals that Jalandhar DCCB ranked third with average gross NPAs to gross advances ratio of 3.82 percent during the period of study. Jalandhar DCCB had shown a significant decline in the ratio at the compounded annual rate of 8.58 percent. Jalandhar DCCB recorded decline in ratio from 5.94 percent in the year 2005-06 to 3.12 percent in the year 2007-08. But this ratio showed an increase in the year 2008-09 and rose to 3.87 percent. After that the ratio observed a declining trend and decreased to 2.92 percent in last year of study i.e. 2012-13. If the present trend persists, this ratio would decrease to 1.06 percent in the year 2016-17 and -0.04 percent in the year 2019-20.

Mansa DCCB was at eighteenth rank with mean gross NPAs to gross advances ratio of 9.79 percent as shown in table 5.1. No definite pattern of trend in the ratio was seen in Mansa DCCB. In 2005-06, ratio was 10.67 percent and came down to 7.95 percent in 2007-08. The ratio had increased to 13.95 percent in 2009-10 and thereafter came down to 7.79 percent in 2011-12. In the last year of study i.e. 2012-13, the ratio again increased to 9.02 percent. The ratio observed significant compounded annual growth at the rate of 0.07 percent in this bank. If the same trend persists, then ratio would further increase to 9.96 percent and 10.03 percent in the year 2016-17 and 2019-20 respectively.

Amritsar DCCB was on nineteenth rank with mean 'gross NPAs to gross advances ratio' of 13.65 percent. The ratio in 2005-06 was 17.12 percent which reduced to 15.98 percent in the year 2007-08. In the next year i.e. 2008-09, this ratio had increased to 16.76 percent and afterwards decreased to 8 percent in the year 2012-13. A significant and negative decline in the ratio in this bank at the compounded annual rate of 10.24 percent was observed during the period of study. It

can be predicted if the same trend sustains that the ratio would decrease to 3.61 percent in the year 2016-17 and -0.40 percent in the year 2019-20.

Gurdaspur DCCB was at last rank with highest mean gross NPAs to gross advances ratio of 15.82 percent among the DCCBs of Punjab. There was overall decrease in the ratio with wide ups and downs. The decline in the ratio was at the compounded annual rate of 5.72 percent and it was significant also. The ratio was 13.91 percent in 2007-08 as compared to 21.36 percent in 2005-06 i.e. the initial year of study. In the next two years the ratio increased and reached to the level of 19.50 percent in 2009-10. The ratio started decreasing thereafter for the remaining years of study and was 11.68 percent in the year 2012-13. On the basis of trend shown during the period of study, it may be foreseen that this ratio will further decrease to 8.84 percent in the year 2016-17 and 6.05 percent in the year 2019-20.

From discussion with district managers of these DCCBS and faculty of staff training institute of these banks at Jalandhar, it has been observed that gross NPAs to gross advances ratio was lowest among Nawanshahar, Jalandhar and Kapurthala DCCB due to their location in cash rich NRI belt of Punjab and composition of their asset portfolio in favour of secured investments. On the other hand in Gurdaspur, Tarn Taran and Amritsar DCCB, main factor was bad loaning during turmoil of Punjab and in Mansa DCCB, a major portion of NPAs was due to failure of the Mansa Cooperative Spinning Mills.

5.4.2 TRENDS IN NET NPAS TO NET ADVANCES RATIO OF DCCBs IN PUNJAB

‘Net NPAs’ in bank is equal to gross NPAs (GNPAs) minus provisions created for these GNPAs. Net NPAs position in DCCBs of Punjab during the period of study is depicted in table 5.2. Table reveals that among twenty DCCBs of Punjab, Nawanshahar DCCB had the lowest average ‘net NPAs to net advances ratio’ and followed by Kapurthala and Jalandhar DCCB. On the other hand, Gurdaspur DCCB was having highest mean ‘net NPAs to net advances ratio’ and followed by Amritsar and Mansa DCCB.

Nawanshahar DCCB was at the first rank with mean ‘net NPAs to net advances ratio’ of -20.76 percent which means bank had created more provisions than required to cover GNPAs. The DCCB had a significant compounded annual growth in the ratio at the rate of 1.71 percent. A fluctuating trend was observed during the period of study.

Table 5.2 Trends in Net NPAs to Net Advances Ratio (percentage) of DCCBs in Punjab

As on 31st March->	2006	2007	2008	2009	2010	2011	2012	2013	Mean	CAGR	t- value	Future Trend		Rank
								2017				2020		
Amritsar	14.15	13.27	11.80	12.36	9.14	7.98	5.28	3.98	9.75	-16.32	-10.30*	-1	-6	19
Bathinda	1.63	1.36	2.02	3.93	3.04	1.79	0.59	-0.64	1.72	-1.87	-1.21*	0	-1	11
Faridkot	4.44	3.50	4.69	3.81	2.34	1.65	2.34	1.36	3.01	-15.29	-4.42*	0	-2	16
Fatehgarh Sahib	3.93	3.64	2.47	2.71	1.30	1.10	0.73	0.47	2.04	-26.62	-9.97*	-2	-3	13
Fazilka	1.87	1.33	1.53	2.02	1.35	2.27	3.76	2.33	2.06	9.39	1.96*	4	4	14
Ferozepur	2.41	1.86	1.78	2.85	1.75	1.63	2.26	0.83	1.92	-8.24	-1.47*	1	1	12
Gurdaspur	15.97	11.31	9.13	10.46	13.92	9.54	7.79	6.59	10.59	-8.69	-2.67*	4	1	20
Hoshiarpur	2.61	2.48	1.07	-0.05	1.20	0.79	0.20	0.48	1.10	-21.47	-2.93*	-1	-2	8
Jalandhar	-3.68	-4.02	-3.29	-4.04	-4.04	-4.57	-4.26	-4.32	-4.03	2.33	-2.42*	-5	-5	3
Kapurthala	-1.49	-2.26	-4.31	-8.93	-9.18	-9.91	-9.12	-9.19	-6.80	29.72	-4.44*	-16	-20	2
Ludhiana	-0.48	-2.92	-1.55	-2.74	-3.87	-3.74	-4.33	-4.55	-3.02	37.87	-4.82*	-7	-8	5
Mansa	7.31	5.42	4.74	5.33	8.77	6.76	3.04	4.84	5.78	-4.90	-0.84*	4	3	18
Moga	3.58	1.90	1.43	0.51	0.18	-0.05	-0.69	-0.98	0.73	-1.83	-8.57*	-4	-5	7
Muktsar	1.39	-0.31	0.33	-0.01	-2.31	-4.07	-2.16	-3.69	-1.35	-214.94	-4.65*	-7	-9	6
Nawanshahar	18.02	-18.70	-17.67	23.12	25.07	23.27	-19.98	-20.29	-20.76	1.71	-1.19*	-24	-26	1
Patiala	5.51	3.60	3.07	4.11	2.28	1.39	1.22	1.12	2.79	-20.75	-5.62*	-2	-3	15
Ropar	-0.10	-3.35	-3.07	-1.47	-4.20	-4.93	-5.73	-6.23	-3.64	81.51	-4.51*	-9	-12	4
Sangrur	1.95	1.95	1.53	1.46	1.46	0.53	0.25	0.57	1.21	-23.03	-5.95*	-1	-1	9
SAS Nagar	NA	2.74	2.18	2.29	1.32	1.32	0.08	-0.73	1.42	-73.27	-7.96*	-2	-3	10
Tarn Taran	4.40	4.62	3.93	4.21	3.84	3.49	3.09	2.69	3.78	-6.78	-6.83*	2	1	17

Source: Calculated from annual reports of various DCCBs *Significant at 5%

In the year 2005-06, the ratio was -18.02 percent which decreased to -18.70 percent in 2006-07 and increased to -17.67 percent in 2007-08. It decreased to -25.07 percent in 2009-10. After increasing to -19.98 percent in 2011-12, this ratio was -20.29 percent in the last year of study. On the basis of trend equations, it may be foreseen that the ratio would be -24.43 percent in the year 2016-17 and -25.90 percent in the year 2019-20. Negative net NPAs means bank had created more than required provision against NPAs.

Kapurthala DCCB followed Nawanshahar DCCB with mean value of 'net NPAs to net advances ratio' of -6.80 percent. The ratio significantly decreased till the year 2010-11 from the year 2005-06. It was -1.49 percent in 2005-06 and reached to the level of -4.31 in 2007-08 and -9.91 percent in 2010-11. Thereafter, the ratio had increased to -9.12 percent in 2011-12 and decreased to -9.19 percent in 2012-13. The DCCB had a significant compounded annual growth in the ratio at the rate of 29.72 percent. The ratio would be -16.19 percent and -19.95 percent in the year 2016-17 and 2019-20 respectively, if the same trend persists.

Jalandhar DCCB scored third rank with average 'net NPAs to net advances ratio' of -4.03 percent. No definite pattern of trend was established. The ratio in this DCCB had a significant compounded annual growth at the rate of 2.33 percent. In 2005-06, the ratio was -3.68 percent and decreased to -4.02 percent in 2006-07 but increased to -3.29 percent in 2007-08. Then the ratio after decreasing to -4.57 percent in 2010-11, again increased to -4.26 percent in the year 2011-12. In the last year of study i.e. 2012-13, the ratio was -4.32 percent. If the same trend continues, the ratio would come to be -4.88 percent in the year 2016-17 and -5.22 percent in the year 2019-20.

On examination of table 5.2, it is clear that Mansa DCCB was at eighteenth rank with mean net NPAs to net advances ratio of 5.78 percent. A significant and declining trend in the ratio was found at the compounded annual rate of 4.90 percent. In the year 2005-06, the ratio was 7.31 percent and abruptly declined to 4.74 percent in the year 2007-08. This ratio had increased to 8.77 percent in the year 2009-10 and thereafter decreased for next two years and reached to 3.04 percent in the year 2011-12. In last year of study i.e. 2012-13 the ratio again increased to 4.84 percent. If the same trend sustains, the ratio would be 4.01 percent and 3.31 percent in the year 2016-17 and 2019-20 respectively.

Amritsar DCCB was at nineteenth rank with the second highest mean net NPAs to net advances ratio of 9.75 percent. A significant and declining trend in the ratio at the compounded annual rate of 16.32 percent was found throughout the period of study. The ratio was 14.15 percent in the initial year of study i.e. 2005-06 and thereafter decreased continuously and reached to 11.80 percent in the year 2007-08. After increasing to 12.36 percent in 2008-09, ratio again decreased continuously for the remaining period of study and touched the level of 3.98 percent in the last year of study i.e. 2012-13. If the same trend continues, the ratio would come down to -1.49 percent in the year 2016-17 and -5.98 percent in the year 2019-20.

As shown in table 5.2, Gurdaspur DCCB was at last rank among DCCBs with highest mean net NPAs to net advances ratio of 10.59 percent. In the year 2005-06, the ratio was 15.97 percent and then declined for next two years and reached to 9.13 percent in 2007-08. Thereafter the ratio witnessed an increase for next two years and touched the level of 13.92 percent in 2009-10. Then, this ratio had recorded continuous decrease till the last year of study and came down to 6.59 percent in the year 2012-13. A significant and negative trend i.e. 8.69 percent annually in the ratio was recorded during the period of study. Trend coefficient gives estimation that this ratio would decrease to 3.58 percent and 0.77 percent in the year 2016-17 and 2019-20 respectively.

The trend in net NPAs to net advances ratio was in consonance with gross NPAs to gross advances ratio in these DCCBs. Nawanshahar, Jalandhar and Kapurthala DCCBs had lowest rather negative percentage of NPAs whereas Mansa, Amritsar and Gurdaspur DCCBs had highest incidence of net NPAs. It is interesting to note that net NPAs in all DCCBs except Fazilka DCCB had decreased continuously and even in nine DCCBs it was negative in 2013.

5.4.3 TRENDS IN SUBSTANDARD ASSETS TO TOTAL ADVANCES RATIO OF DCCBs IN PUNJAB

As discussed earlier, “Substandard asset is an asset which has remained overdue for a period not exceeding twelve months in respect of both agricultural and non-agricultural loans should be treated as sub-standard (RBI circular DBOD.No.BP.BC.9/21.04.048/2014-15)”. Banks always tries to recover these NPAs at the earliest so that they may not become doubtful or bad loans. ‘Substandard assets to total advances ratio’ shows the fraction of ‘substandard assets’ in the ‘total advances’ of a bank. As shown in table 5.3, it is clear that Sangrur DCCB was having

lowest mean ratio of sub standard assets to total advances among twenty DCCBs of Punjab followed by Ferozpur and Moga DCCB. Whereas Gurdaspur DCCB had the highest ratio of sub standard to total advances followed by Amritsar DCCB and Mansa DCCB.

First among DCCBs was Sangrur DCCB with mean 1.43 percent sub standard assets to total advances ratio as shown in table 5.3. The DCCB had observed a significant decline in the ratio at the compounded annual rate of 18.14. The sub standard assets to total advances ratio increased to 2.12 percent in the year 2006-07 from 1.85 percent in the initial year of the study i.e. 2005-06. The ratio had decreased to 1.97 percent in 2007-08 but increased to 2.14 percent in 2008-09. The ratio decreased for next three consecutive years and was 0.61 percent in 2011-12 and increased slightly to 0.63 percent in the last year of the study i.e. 2012-13. If the same inclination lengthens the sub standard assets to total advances ratio would be -0.38 percent and -1.11 percent in the year 2016-17 and 2019-20 respectively.

Ferozpur DCCB and Moga DCCB with 1.89 percent mean value sub standard assets to total advances ratio were ranked second among DCCBs. Ferozpur DCCB had 2.85 percent sub standard assets to total advances ratio in 2005-06, which had decreased to 1.69 percent in 2007-08. The ratio then increased to 2.38 percent in 2008-09. Thereafter it decreased for two years and was 1.27 percent in the year 2010-11. The ratio again increased to 2.12 percent in 2011-12 and finally decreased to 1.04 percent in the last year of the study i.e. 2012-13. The DCCB witnessed a significant decline in the ratio at the compounded annual rate of 10.43 percent. If the same trend continues, the sub standard assets to total advances ratio would be 0.40 percent and -0.20 percent in the year 2016-17 and 2019-20 respectively.

Moga DCCB had 3.26 percent sub standard assets to total advances ratio in the year 2005-06. The ratio decreased during the period of the study and was 1.12 percent in the last year of the study i.e. 2012-13. The ratio in this DCCB witnessed a significant declining trend at the compounded annual rate of 14.11 percent. If the same tendency prolongs, the ratio in the year 2016-17 and 2019-20 would be -0.26 percent and -1.13 percent respectively.

On examination of table 5.3, it is clear that eighteenth among DCCBs was Mansa DCCB with a mean of 6.31 percent sub standard assets to total advances ratio.

Table 5.3 Trends in Sub Standard Assets to Total Advances Ratio (percentage) of DCCBs in Punjab

As on 31st March- >	2006	2007	2008	2009	2010	2011	2012	2013	Mean	CAGR	t- value	Future Trend	Rank	
											2017	2020		
Amritsar	11.04	10.65	8.12	8.47	4.91	4.55	2.72	2.12	6.57	-21.80	-11.72*	-4	-8	19
Bathinda	3.00	2.74	3.69	5.28	4.37	2.63	1.89	1.08	3.09	-11.40	-1.31*	1	0	11
Faridkot	3.95	4.03	4.21	3.56	1.49	1.52	2.12	1.49	2.80	-15.34	-4.14*	-1	-2	10
Fatehgarh Sahib	5.23	5.05	2.47	2.92	2.24	1.73	1.43	1.19	2.78	-19.30	-5.82*	-2	-3	9
Fazilka	2.17	2.18	2.51	2.98	2.10	2.46	2.90	1.63	2.36	-1.14	-0.19*	2	2	6
Ferozepur	2.85	2.45	1.69	2.38	1.30	1.27	2.12	1.04	1.89	-10.43	-2.68*	0	0	2
Gurdaspur	13.06	9.23	6.40	7.16	15.50	7.26	6.25	5.63	8.81	-7.64	-1.25*	4	2	20
Hoshiarpur	5.65	5.88	3.87	2.94	3.55	2.54	1.70	1.46	3.45	-18.05	-7.27*	-1	-3	13
Jalandhar	4.95	3.89	2.41	2.94	2.78	1.94	1.51	1.51	2.74	-15.13	-5.57*	-1	-2	8
Kapurthala	3.88	3.65	2.88	2.91	1.87	1.28	1.30	1.44	2.40	-16.32	-7.55*	-1	-2	7
Ludhiana	3.47	2.93	3.30	3.64	1.39	1.19	0.86	0.88	2.21	-20.95	-4.47*	-1	-2	4
Mansa	7.74	6.08	5.67	6.14	8.16	7.22	4.02	5.42	6.31	-4.13	-1.16*	5	4	18
Moga	3.26	2.47	2.11	1.99	1.66	1.36	1.15	1.12	1.89	-14.11	-8.76*	0	-1	3
Muktsar	3.98	3.79	3.58	3.90	4.21	3.48	4.59	2.93	3.81	-1.42	-0.49*	4	3	16
Nawanshahar	3.95	2.56	2.00	2.09	2.61	2.20	1.78	1.46	2.33	-9.39	-3.06*	1	0	5
Patiala	5.98	4.54	3.60	4.30	2.75	2.08	1.75	1.65	3.33	-17.22	-7.50*	-1	-3	12
Ropar	4.16	4.44	4.16	5.49	4.64	3.28	1.86	1.36	3.67	-14.41	-2.69*	0	-1	14
Sangrur	1.85	2.12	1.97	2.14	1.29	0.85	0.61	0.63	1.43	-18.14	-4.71*	0	-1	1
SAS Nagar	NA	2.77	5.24	6.68	4.45	3.57	1.75	3.67	4.02	-6.80	-0.84*	2	1	17
Tarn Taran	4.57	4.67	4.10	4.04	3.88	3.51	3.05	2.46	3.79	-7.96	-8.87*	2	1	15

Source: Calculated from annual reports of various DCCBs

*Significant at 5%

The ratio was significantly declined at the compounded annual rate of 4.13 percent. The ratio of 7.74 percent in 2005-06 had decreased to 5.67 percent in 2007-08. The ratio witnessed an increase for next two years and was found to be 8.16 percent in the year 2009-10. After that ratio again decreased for two years and was 4.02 percent in the year 2011-12. The last year of study i.e. 2012-13 witnessed an increase and the ratio was found to be 5.42 percent. If the same trend persists, the sub standard assets to total advances ratio would be 4.54 percent and 3.83 percent in the year 2016-17 and 2019-20 respectively.

Amritsar DCCB with mean 6.57 sub standard assets to total advances ratio ranked nineteenth among DCCBs of Punjab. The ratio in the first year of the study i.e. 2005-06 was 11.04 percent which decreased to 8.12 percent in 2007-08. The ratio then amplified to 8.47 percent in 2008-09 and decreased continuously for remaining period of the study and was 2.12 percent in the year 2012-13. The ratio was significantly declined at the compounded annual rate of 21.80 percent. If the same tendency continues, the ratio would be -3.82 percent and -7.97 percent in the year 2016-17 and 2019-20 respectively.

Gurdaspur DCCB had an average of 8.81 percent for the period of study was ranked last among DCCBs. The DCCB had 13.06 percent 'sub standard assets to total advances ratio' in the initial year of the study i.e. 2005-06. The ratio then decreased to 6.4 percent in the year 2007-08 after decreasing for two years and increased to 15.5 percent in the year 2009-10. Thereafter the ratio decreased continuously for the remaining period of the study and was found to be 5.63 percent in the last year of the study i.e. 2012-13. The ratio in this DCCB significantly declined at compounded annual rate of 7.64 percent. The ratio would be 3.82 percent and 1.83 percent in the year 2016-17 and 2019-20 respectively, if same trend continues.

Above analysis reveals that all the DCCBs had declining trend in compounded annual growth of substandard assets to total advances ratio.

5.4.4 TRENDS IN DOUBTFUL ASSETS TO TOTAL ADVANCES RATIO OF DCCBs IN PUNJAB

“As per RBI circular DBOD.No.BP.BC.9/21.04.048/2014-15, An asset which has remained overdue for a period exceeding one year in respect of both agricultural and non-agricultural loans should be treated as doubtful”. Table 5.4 conveys that among twenty DCCBs of Punjab, Nawanshahar DCCB had lowest average doubtful

Table 5.4 Trends in Doubtful Assets to Total Advances Ratio (percentage) of DCCBs in Punjab

As on 31st March- >	2006	2007	2008	2009	2010	2011	2012	2013	Mean	CAGR	t- value	Future Trend		Rank
												2017	2020	
Amritsar	4.80	5.69	6.76	7.23	7.90	7.03	5.77	4.87	6.26	0.44	0.15*	6	7	20
Bathinda	0.42	0.57	0.62	0.71	0.86	1.18	1.05	1.65	0.88	19.16	6.58*	2	2	5
Faridkot	2.00	1.67	2.53	2.23	2.96	1.51	1.27	1.42	1.95	-5.83	-1.11*	1	1	13
Fatehgarh Sahib	0.64	0.91	0.50	0.43	0.31	0.41	0.41	0.56	0.52	-6.79	-1.57*	0	0	3
Fazilka	2.70	2.46	2.15	1.97	2.44	2.76	2.46	1.88	2.35	-1.85	-0.80*	2	2	17
Ferozepur	2.37	2.36	1.64	1.47	1.03	0.82	1.12	0.57	1.42	-17.49	-6.90*	-1	-1	8
Gurdaspur	5.13	4.97	5.05	5.53	2.80	5.94	5.23	4.47	4.89	-1.07	-0.26*	5	4	19
Hoshiarpur	0.87	1.11	1.00	1.33	2.16	2.44	2.51	2.52	1.74	19.15	7.08*	4	5	11
Jalandhar	0.44	0.41	0.28	0.32	0.30	0.29	0.25	1.39	0.46	6.84	1.22*	1	1	2
Kapurthala	0.22	0.42	0.48	0.91	1.08	1.06	0.80	0.82	0.72	19.36	2.68*	1	2	4
Ludhiana	2.85	1.77	1.47	1.08	1.92	1.76	1.28	2.10	1.78	-3.13	-0.83*	1	1	12
Mansa	1.01	0.83	0.81	0.90	4.04	4.07	3.22	2.84	2.21	27.50	2.74*	6	7	15
Moga	1.76	2.62	1.54	2.06	2.57	2.65	2.23	1.66	2.13	0.73	0.18*	2	2	14
Muktsar	1.24	2.26	2.98	2.89	2.16	2.25	2.26	2.33	2.30	3.96	0.65*	3	3	16
Nawanshahar	0.68	0.64	0.16	0.17	0.20	0.16	0.20	0.89	0.39	-4.33	-0.17*	0	0	1
Patiala	0.61	0.78	0.92	0.90	0.93	0.90	0.98	1.92	0.99	11.41	2.79*	2	2	6
Ropar	1.32	0.52	1.34	1.35	1.91	2.14	1.99	2.57	1.64	16.98	4.36*	3	4	9
Sangrur	0.30	0.47	0.53	0.66	3.22	0.96	1.09	2.25	1.19	29.52	1.78*	3	4	7
SAS Nagar	NA	5.47	2.70	2.21	3.05	3.79	4.73	2.44	3.48	-2.66	-0.49*	3	2	18
Tarn Taran	1.84	1.82	1.56	1.90	1.64	1.52	1.47	1.53	1.66	-3.01	-2.72*	1	1	10

*Significant at 5%

Source: Calculated from annual reports of various DCCBs

assets to total advances ratio followed by Jalandhar and Fatehgarh Sahib DCCB. While Amritsar DCCB had highest mean doubtful assets to total advances and followed by Gurdaspur DCCB and SAS Nagar DCCB.

First among DCCBs was Nawanshahar DCCB with 0.39 percent average doubtful assets to total advances ratio. The DCCB had witnessed a significant decline in the ratio at the compounded annual rate of 4.33 percent. The DCCB had ratio of 0.68 percent in the initial year of the study i.e. 2005-06, which after decreasing for two years was 0.16 percent in 2007-08. The doubtful assets to total advances ratio increased to 0.20 percent in the year 2009-10 and declined to 0.16 percent in 2010-11 and again amplified to 0.20 percent in 2011-12. The ratio in 2012-13 had an abrupt increase and it was 0.89 percent. If the same trend sustains, the doubtful assets to total advances ratio would be 0.32 percent and 0.30 percent in the year 2016-17 and 2019-20 respectively.

Table 5.4 conveys that Jalandhar DCCB with 0.46 percent mean doubtful assets to total advances ratio was ranked second among DCCBs. The DCCB had a ratio of 0.44 percent in 2005-06 which decreased to 0.28 percent in 2007-08. It increased to 0.32 percent in 2008-09 and then decreased for next three years to 0.25 percent in the year 2011-12. The ratio in the last year of the study i.e. 2012-13 increased steeply to 1.39 percent. The DCCB had a significant growth in the ratio at the compounded annual rate of 6.84 percent during the period of the study. If the same affinity continues, the ratio would be 0.98 percent in the year 2016-17 and 1.19 percent in the year 2019-20.

Third among DCCBs was Fatehgarh Sahib DCCB with mean doubtful assets to total advances ratio of 0.52 percent. The ratio increased from 0.64 percent in 2005-06 to 0.91 percent in 2006-07. After decreasing for three consecutive years and it was 0.31 percent in the year 2009-10. The last year of the study i.e. 2012-13, the ratio again witnessed an increase and was 0.56 percent. The DCCB had a significant decline in the ratio at the rate of 6.79 percent compounded annually. If the similar trend persists, the ratio in the year 2016-17 and 2019-20 would be 0.21 percent and 0.08 percent respectively.

On perusal of table 5.4, it is clear that SAS Nagar DCCB ranked eighteenth with average 3.48 percent doubtful assets to total advances ratio. The DCCB had a ratio of 5.47 percent in the year 2006-07 which after decreasing for two consecutive years was 2.21 percent in the year 2008-09. The ratio then increased to 4.73 percent in

the year 2011-12 after witnessing an increasing trend for three years. In the last year of the study i.e. 2012-13, the ratio finally decreased to 2.44 percent. The DCCB had a significant compounded annual decline in the ratio at the rate of 2.66. If the analogous tendency persists the doubtful assets to total advances ratio would be 2.63 percent and 2.26 percent in the year 2016-17 and 2019-20 respectively.

Gurdaspur DCCB ranked nineteenth among DCCBs with mean doubtful assets to total advances ratio of 4.89 percent. The ratio in this DCCB significantly declined at compounded annual rate of 1.07 percent. The DCCB witnessed a decline in the ratio from 5.13 percent in 2005-06 to 4.97 percent in 2006-07. The ratio then increased for two years and reached a value of 5.53 percent in the year 2008-09. The steep decline in the year 2009-10 was recorded when the ratio was 2.80 percent. Again after a steep hike in the year 2010-11, 'doubtful assets to total advances ratio' was 5.94 percent. The ratio again declined for last two years of the study and was 4.47 percent in the year 2012-13. If similar trend prevails, the ratio would be 4.59 percent and 4.47 percent in the year 2016-17 and 2019-20 respectively.

Amritsar DCCB had average doubtful assets to total advances ratio of 6.26 percent and was ranked last among DCCBs as shown in table 5.4. The DCCB had a significant growth rate in the ratio of 0.44 percent compounded annually. The DCCB had 4.80 percent doubtful assets to total advances ratio in 2005-06, which increased to 7.90 percent in 2009-10. The ratio decreased for the remaining period of the study and was 4.87 in the year 2012-13. If the ratio in this DCCB followed similar trend, the ratio in the year 2016-17 and 2019-20 would be 6.47 percent and 6.55 percent respectively.

Above discussion reveals that nine DCCBs had declining trend in the compounded growth of doubtful assets. Nawanshahar DCCB was best in keeping their doubtful assets at low level where as Amritsar and Gurdaspur DCCB should take steps to reduce their doubtful assets.

5.4.5 TRENDS IN LOSS ASSETS TO TOTAL ADVANCES RATIO OF DCCBs IN PUNJAB

“A loss asset is one where loss has been identified by the bank or internal or external auditors or by the RBI inspectors but the amount has not been written off wholly (RBI circular DBOD.No.BP.BC.9/21.04.048/2014-15)”. Study of table 5.5 shows that among twenty DCCBs, Muktsar DCCB was having lowest loss assets to total advances ratio followed by Moga DCCB and Fazilka DCCB whereas Tarn

Table 5.5 Trends in Loss Assets to Total Advances Ratio (percentage) of DCCBs in Punjab

As on 31st March- >	2006	2007	2008	2009	2010	2011	2012	2013	Mean	CAGR	t- value	Future Trend	Rank	
												2017	2020	
Amritsar	0.63	0.57	1.10	1.07	0.85	0.57	0.91	1.01	0.84	4.21	0.88*	1.07	1.16	9
Bathinda	0.24	0.30	0.32	0.48	0.69	0.78	0.93	0.05	0.47	-3.44	0.84*	0.77	0.89	4
Faridkot	0.47	0.40	0.55	0.58	0.33	0.94	0.90	0.25	0.55	0.72	0.54*	0.72	0.78	6
Fatehgarh Sahib	1.43	1.64	3.24	3.15	2.41	2.55	2.28	2.01	2.34	3.71	0.50*	2.74	2.90	19
Fazilka	0.39	0.33	0.26	0.22	0.21	0.19	1.09	0.89	0.45	13.44	1.81*	1.07	1.32	3
Ferozepur	1.45	0.71	1.45	1.61	1.76	1.76	1.35	1.35	1.43	4.08	0.80*	1.75	1.87	13
Gurdaspur	3.18	2.71	2.46	2.16	2.02	1.90	1.70	1.57	2.21	-9.14	-10.75*	0.60	-0.04	18
Hoshiarpur	2.10	1.82	1.08	0.96	0.53	0.41	0.37	0.34	0.95	-24.97	-6.66*	-1.01	-1.79	11
Jalandhar	0.55	0.52	0.42	0.61	0.73	0.95	1.11	0.02	0.61	-18.93	0.20*	0.70	0.73	8
Kapurthala	0.87	0.80	0.70	0.40	0.33	0.30	0.27	0.25	0.49	-18.25	-6.75*	-0.25	-0.54	5
Ludhiana	2.72	2.67	2.20	2.18	2.18	1.92	1.53	0.68	2.01	-14.20	-5.79*	0.15	-0.59	16
Mansa	1.92	1.66	1.48	1.42	1.75	0.62	0.55	0.75	1.27	-15.81	-4.06*	-0.16	-0.73	12
Moga	0.91	0.00	1.00	0.48	0.09	0.10	0.09	0.12	0.35	-6.68	-1.82*	-0.38	-0.68	2
Muktsar	0.17	0.15	0.13	0.11	0.10	0.15	0.08	0.07	0.12	-9.56	-3.55*	0.04	0.00	1
Nawanshahar	0.46	0.65	0.71	0.74	0.77	0.63	0.59	0.06	0.58	-16.14	-1.13*	0.28	0.16	7
Patiala	1.64	1.45	1.74	2.05	1.92	1.77	1.63	0.44	1.58	-9.77	-1.21*	0.91	0.64	14
Ropar	1.46	3.14	1.69	3.01	1.79	1.54	1.75	1.07	1.93	-6.79	-1.22*	0.92	0.51	15
Sangrur	2.83	2.67	2.72	2.65	0.63	2.56	2.14	0.46	2.08	-16.72	-2.11*	0.15	-0.63	17
SAS Nagar	NA	0.73	0.24	0.86	1.17	0.96	1.41	1.00	0.91	17.92	2.10*	2	2	10
Tarn Taran	4.86	4.54	3.87	3.56	3.30	3.07	2.81	2.56	3.57	-8.72	-13.58*	1.12	0.14	20

Source: Calculated from annual reports of various DCCBs

*Significant at 5%

Taran DCCB had highest ratio of loss assets to total advances followed by Fatehgarh Sahib and Gurdaspur DCCB.

Among DCCBs, Muktsar DCCB was at first rank with least mean of loss assets to total advances i.e. 0.12 percent. A significant declining trend was observed in the ratio at the compounded annual rate of 9.56 percent during the period of study. The ratio of loss assets to total advances had continuously declined till the year 2009-10 and reached to 0.10 percent as compared to 0.17 percent in the initial year of study i.e. 2005-06. Then the ratio witnessed sudden increase and touched the level of 0.15 percent in 2010-11 and thereafter again declined to 0.07 percent in 2012-13. On the basis of trend equations, it may be foreseen that the ratio would lessen to 0.04 percent in the year 2016-17 and 0.00 percent in the year 2019-20.

Table 5.5 depicts that among DCCBs, Moga DCCB was at second rank having 0.35 percent as mean value of loss assets to total advances ratio. A significant and fluctuating trend in the ratio was registered with negative growth rate of 6.68 percent compounded annually. The ratio was 0.91 percent in 2005-06 and decreased to 0.00 in 2006-07 and rose to 1.00 percent in 2007-08. The ratio had decreased to 0.09 percent in 2009-10. Thereafter, the ratio witnessed an increase to 0.10 percent in the year 2010-11 and then came down to 0.09 percent in 2011-12. It rose to 0.12 percent in the last year of study i.e. 2012-13. If the same trend continues, the future estimation will indicate decrease in the ratio to -0.38 percent and -0.68 percent in the year 2016-17 and 2019-20 respectively.

Fazilka DCCB had followed Moga DCCB with 0.45 percent as mean of loss assets to total advances ratio. The ratio had decreased continuously and reached to 0.19 percent in the year 2010-11 from 0.39 percent in the year 2005-06. Then in the year 2011-12, this ratio had suddenly increased to 1.09 percent and decreased to 0.89 percent in 2012-13. The growth in the ratio was found to be significant at the rate of 13.44 percent during the period of study. If the same trend persists, then the future ratio will be 1.07 percent in the year 2016-17 and 1.32 percent in the year 2019-20.

Table 5.5 elucidates that Gurdaspur DCCB ranked eighteenth among DCCBs with average 2.21 percent loss assets to total advances ratio. The DCCB had a ratio of 3.18 percent in the year 2005-06 which decreased during the period of the study and was 1.57 percent in the year 2012-13. The ratio observed a significant decline at the compounded annual rate of 9.14 percent. If the same tendency continues, the ratio in the year 2016-17 and 2019-20 would be 0.60 percent and -0.04 percent respectively.

Fatehgarh Sahib DCCB ranked nineteenth among DCCBs with average 2.34 percent loss assets to total advances ratio. The DCCB witnessed a significant annual compounded growth rate of 3.71 percent for this ratio. The ratio increased to 3.24 percent in 2007-08 as compared to 1.43 percent in the year 2005-06. The ratio then decreased for two years and reached 2.41 percent in 2009-10. It again had an increase and was 2.55 percent in the year 2010-11. The last two years had seen a decline in the ratio and the calculated value in the year 2012-13 was 2.01 percent. If analogous trend pertains, the ratio in the year 2016-17 and 2019-20 would be 2.74 percent and 2.90 percent respectively.

It is evident from table 5.5 that last among DCCBs was Tarn Taran DCCB with 3.57 percent mean loss assets to total advances ratio. The DCCB had a significant negative growth in the ratio at the rate of 8.72 percent compounded annually. The ratio witnessed a declining trend throughout the study and was 2.56 percent in the last year i.e. 2012-13 as compared to 4.86 percent in the year 2005-06. If the comparable pattern sustains, the ratio in the year 2016-17 and 2019-20 would be 1.12 percent and 0.14 percent respectively.

It is interesting to note that fourteen DCCBs had observed declining trend in the loss assets to total advances ratio. Muktsar DCCB had least loss assets which showed efficiency in managing its loan assets well whereas Tarn Taran DCCB had highest loss assets and SAS Nagar showed highest growth in loss assets. Both these DCCBs require immediate action to keep its loss assets at a minimum and proper recovery procedure should be adopted.

5.4.6 TRENDS IN EARNING ASSETS TO TOTAL ASSETS RATIO OF DCCBs IN PUNJAB

‘Earning assets to total assets ratio’ shows the percentage of ‘earning assets’ in the ‘total assets’ of a bank. It is clear from table 5.6 that Patiala DCCB had highest average earning assets to total assets ratio followed by Jalandhar and Faridkot DCCBs among twenty DCCBs of Punjab. On the other hand Ludhiana DCCB had lowest average of earnings assets to total assets ratio followed by Mansa DCCB and Moga DCCB.

Patiala DCCB ranked first among DCCBs with mean 94.71 percent ‘earning assets to total assets ratio’. The ratio escalated in initial four years and increased to 95.45 percent in the year 2009-10 from 92.43 percent in the year 2005-06.

Table 5.6 Trends in Earning Assets to Total Assets Ratio (percentage) of DCCBs in Punjab

As on 31st March->	2006	2007	2008	2009	2010	2011	2012	2013	Mean	CAGR	t- value	Future Trend	Rank	
												2017	2020	
Amritsar	87.31	89.17	90.71	90.89	89.48	89.00	87.80	88.50	89.11	-0.07	-0.29*	89	88	17
Bathinda	86.96	90.62	91.88	91.50	90.47	93.73	93.63	91.99	91.35	0.72	2.74*	96	98	13
Faridkot	92.96	93.32	94.26	94.85	94.38	93.62	92.77	93.82	93.75	0.01	0.09*	94	94	3
Fatehgarh Sahib	91.60	92.69	93.31	94.38	93.71	93.54	94.13	92.01	93.17	0.13	0.76*	94	94	7
Fazilka	90.91	92.32	94.23	94.37	93.65	94.55	94.61	94.14	93.60	0.44	2.88*	97	98	5
Ferozepur	91.05	93.39	92.24	93.63	93.37	92.62	91.21	92.21	92.47	-0.02	-0.14*	92	92	11
Gurdaspur	87.44	90.39	92.59	92.05	92.11	90.23	87.96	88.82	90.20	-0.12	-0.35*	89	89	16
Hoshiarpur	91.36	92.33	92.57	93.48	93.75	93.50	92.68	92.12	92.72	0.13	0.95*	94	94	9
Jalandhar	93.67	94.68	93.17	92.67	93.36	94.54	94.86	93.53	93.81	0.06	0.43*	94	94	2
Kapurthala	94.69	94.67	93.57	93.14	92.42	93.58	92.95	92.76	93.47	-0.29	-3.18*	91	91	6
Ludhiana	79.19	80.75	84.34	73.20	77.26	71.05	71.63	74.93	76.55	-1.71	-2.34*	67	63	20
Mansa	88.82	90.16	89.78	88.24	87.44	85.17	86.86	81.24	87.21	-1.16	-3.89*	80	77	19
Moga	92.46	92.58	93.82	94.64	93.94	76.89	73.51	89.09	88.37	-2.37	-1.82*	73	67	18
Muktsar	88.53	90.46	93.16	93.42	90.46	90.58	89.77	88.72	90.64	-0.17	-0.52*	89	89	15
Nawanshahar	94.17	94.84	93.44	91.52	91.72	92.85	91.23	92.71	92.81	-0.38	-2.23*	90	89	8
Patiala	92.43	94.08	95.03	95.13	95.45	95.43	95.04	95.07	94.71	0.32	2.51*	97	98	1
Ropar	92.12	94.08	93.06	93.30	90.84	91.20	92.91	92.37	92.49	-0.16	-0.85*	91	91	10
Sangrur	91.69	93.71	93.40	85.30	93.04	93.85	89.73	89.17	91.23	-0.37	-0.70*	89	88	14
SAS Nagar	NA	91.96	93.85	92.80	93.85	94.72	94.40	94.17	93.68	0.37	2.68*	96	97	4
Tarn Taran	89.18	92.24	92.21	92.41	92.76	92.45	91.87	94.08	92.15	0.44	2.48*	95	96	12

Source: Calculated from annual reports of various DCCBs

*Significant at 5%

The ratio decreased thereafter to 95.07 percent in the year 2012-13 after following a declining trend for remaining years of the study. The ratio had a significant compounded annual growth at the rate of 0.32 percent. If the analogous trend sustains, the ratio in the year 2016-17 and 2019-20 would be 96.92 percent and 97.81 percent respectively.

Table 5.6 reveals that Jalandhar DCCB with 93.81 percent mean earning assets to total assets ratio ranked second among DCCBs and had a significant growth in the ratio at the rate of 0.06 percent during the period of the study. The ratio of 93.67 percent in the initial year of the study i.e. 2005-06 increased to 94.68 percent in the year 2006-07 and thereafter decreased for two consecutive years and was 92.67 percent in the year 2008-09. Earning assets to total assets ratio increased for next three years and was 94.86 percent in the year 2011-12 and decreased to 93.53 percent in 2012-13. If analogous trend sustains, the ratio would be 94.23 percent and 94.40 percent in the year 2016-17 and 2019-20 respectively.

Third among DCCBs was Faridkot DCCB with an average earning assets to total assets ratio of 93.75 percent. The ratio in this DCCB witnessed a significant growth rate of 0.01 percent compounded annually. The 'earning assets to total assets ratio' increased from 92.96 percent in the year 2005-06 to 94.85 percent in the year 2008-09. The ratio decreased to 92.77 percent in the year 2011-12 after witnessing a declining tendency for three years. The ratio increased to 93.82 percent in 2012-13. If similar tendency persists, the ratio would be 93.83 percent and 93.86 percent in the year 2016-17 and 2019-20 respectively.

Moga DCCB was at eighteenth rank among DCCBs with 88.37 percent mean earning assets to total assets ratio. The DCCB had observed an increase for first three years of the study and the value registered in the year 2008-09 was 94.64 percent as compared to 92.46 percent in the year 2005-06. The ratio decreased to 93.64 percent in the year 2009-10 and dipped swiftly to 76.89 percent in the year 2010-11. Earning assets to total assets ratio declined further to 73.51 percent in 2011-12 and increased hastily to 89.09 percent in the last year of the study i.e. 2012-13. The DCCB had a significant annual compounded decline in the ratio at the rate of 2.37 percent. If the same tendency continues, the ratio in the year 2016-17 and 2019-20 would be 73.15 percent and 67.06 percent respectively.

Nineteenth among DCCBs was Mansa DCCB with mean 87.21 percent of 'earning assets to total assets ratio'. The DCCB witnessed significant decline in the

ratio at compounded annual rate of 1.16 percent. The ratio increased to 90.16 percent in 2006-07 as compared to 88.82 percent in 2005-06. The ratio decreased to 85.17 percent in 2010-11 after witnessing a decreasing trend for four years. The ratio increased to 86.86 percent in 2011-12 and decreased to 81.24 percent in 2012-13. If similar trend persists, the ratio would be 79.70 percent in the year 2016-17 and 76.70 percent in the year 2019-20.

Last among DCCBs was Ludhiana DCCB with mean earning assets to total assets ratio of 76.55 percent as shown in table 5.6. The DCCB observed an escalating trend in the initial years of study where ratio augmented to 84.34 percent in 2007-08 as compared to 79.19 percent in 2005-06. The ratio declined hastily to 73.20 percent in 2008-09 and increased to 77.26 percent in 2009-10. 'Earning assets to total assets ratio' decreased to 71.05 percent in 2010-11 and increased to 74.93 percent in 2012-13. The ratio had witnessed a significant decline of 1.71 percent compounded annually. If the similar pattern sustains, the ratio would be 66.62 percent and 62.64 percent in the year 2016-17 and 2019-20 respectively.

Above analysis shows that sixteen DCCBs in Punjab had more than 90 percent of their total assets as earning assets and nine banks had positive compounded growth rate.

5.5 COMPARATIVE STUDY OF ASSET QUALITY OF DCCBs IN PUNJAB

Mean values of asset quality ratios and their compounded growth rates are shown in Table 5.7 and 5.8. A perusal of these tables shows that

- **GROSS NPAS TO GROSS ADVANCES RATIO**

It is encouraging to note that out of twenty DCCBs in Punjab only two i.e. Mansa DCCB and Fazilka DCCB had increasing tendency in gross NPAs to gross advances ratio and all other had negative compounded growth rate. Out of these twenty DCCBs, Gurdaspur DCCB had highest mean gross NPAs to gross advances ratio of 15.82 percent followed by Amritsar DCCB and Mansa DCCB with 13.65 percent and 9.79 percent respectively. Whereas Nawanshahar DCCB had the least gross NPAs to gross advances ratio of 3.29 percent followed by Kapurthala DCCB and Jalandhar DCCB with mean ratio of 3.61 percent and 3.82 percent respectively.

Table 5.7 Comparative Analysis of Asset Quality in terms of Mean

	Gross NPAs To Gross Advances (%)	Net NPAs To Net Advances (%)	Sub Std Assets to Total Advances (%)	Doubtful Assets to Total Advances (%)	Loss Assets to Total Advances (%)	Earning Assets to Total Assets (%)
Amritsar	13.65	9.75	6.57	6.26	0.84	89.11
Bathinda	4.49	1.72	3.09	0.88	0.47	91.35
Faridkot	5.50	3.01	2.80	1.95	0.55	93.75
Fatehgarh Sahib	5.64	2.04	2.78	0.52	2.34	93.17
Fazilka	5.16	2.06	2.36	2.35	0.45	93.60
Ferozepur	4.76	1.92	1.89	1.42	1.43	92.47
Gurdaspur	15.82	10.59	8.81	4.89	2.21	90.20
Hoshiarpur	6.18	1.10	3.45	1.74	0.95	92.72
Jalandhar	3.82	-4.03	2.74	0.46	0.61	93.81
Kapurthala	3.61	-6.80	2.40	0.72	0.49	93.47
Ludhiana	6.00	-3.02	2.21	1.78	2.01	76.55
Mansa	9.79	5.78	6.31	2.21	1.27	87.21
Moga	4.38	0.73	1.89	2.13	0.35	88.37
Muktsar	6.65	-1.35	3.81	2.30	0.12	90.64
Nawanshahar	3.29	-20.76	2.33	0.39	0.58	92.81
Patiala	5.90	2.79	3.33	0.99	1.58	94.71
Ropar	7.25	-3.64	3.67	1.64	1.93	92.49
Sangrur	4.74	1.21	1.43	1.19	2.08	91.23
SAS Nagar	8.41	1.42	4.02	3.48	0.91	93.68
Tarn Taran	9.02	3.78	3.79	1.66	3.57	92.15

Source: Calculated from annual reports of various DCCBs

Table 5.8 Comparative Analysis of Asset Quality in terms of CAGR

	Gross NPAs To Gross Advances (%)	Net NPAs To Net Advances (%)	Sub Std Assets To Total Advances (%)	Doubtful Assets To Total Advances (%)	Loss Assets To Total Advances (%)	Earning Assets To Total Assets (%)
Amritsar	-10.24	-16.32	-21.80	0.44	4.21	-0.07
Bathinda	-2.64	-1.87	-11.40	19.16	-3.44	0.72
Faridkot	-12.03	-15.29	-15.34	-5.83	0.72	0.01
Fatehgarh Sahib	-9.96	-26.62	-19.30	-6.79	3.71	0.13
Fazilka	0.30	9.39	-1.14	-1.85	13.44	0.44
Ferozepur	-8.69	-8.24	-10.43	-17.49	4.08	-0.02
Gurdaspur	-5.72	-8.69	-7.64	-1.07	-9.14	-0.12
Hoshiarpur	-8.80	-21.47	-18.05	19.15	-24.97	0.13
Jalandhar	-8.58	2.33	-15.13	6.84	-18.93	0.06
Kapurthala	-11.15	29.72	-16.32	19.36	-18.25	-0.29
Ludhiana	-12.40	37.87	-20.95	-3.13	-14.20	-1.71
Mansa	0.07	-4.90	-4.13	27.50	-15.81	-1.16
Moga	-8.39	-1.83	-14.11	0.73	-6.68	-2.37
Muktsar	-2.80	-214.94	-1.42	3.96	-9.56	-0.17
Nawanshahar	-7.95	1.71	-9.39	-4.33	-16.14	-0.38
Patiala	-9.43	-20.75	-17.22	11.41	-9.77	0.32
Ropar	-5.11	81.51	-14.41	16.98	-6.79	-0.16
Sangrur	-5.06	-23.03	-18.14	29.52	-16.72	-0.37
SAS Nagar	-3.24	-73.27	-6.80	-2.66	17.92	0.37
Tarn Taran	-7.34	-6.78	-7.96	-3.01	-8.72	0.44

Source: Calculated from annual reports of various DCCBS

In terms of growth in the ratio, the Fazilka DCCB had highest growth at the compounded annual rate of 0.30 percent followed by Mansa DCCB with 0.07 percent. All other DCCBs had a declining trend and Ludhiana DCCB observed decline rate of -12.40 percent compounded annually followed by Faridkot DCCB and Kapurthala DCCB at the rate of -12.03 percent and -11.15 percent compounded annually in the ratio. The DCCBs with higher gross NPAs to gross advances ratio and higher growth rate need immediate action to reduce these ratios.

- **NET NPAS TO NET ADVANCES RATIO**

Gurdaspur DCCB was having the highest mean 'net NPAs to net advances ratio' of 10.59 percent and it was followed by Amritsar DCCB and Mansa DCCB with mean ratio of 9.75 percent and 5.78 percent respectively. On the other hand, Nawanshahar DCCB had least mean net NPAs to net advances ratio of -20.76 percent followed by Kapurthala DCCB with -6.80 percent and Jalandhar DCCB with -4.03 percent.

Ropar DCCB was having highest growth in the 'net NPAs to net advances ratio' at the compounded annual rate of 81.51 percent followed by Ludhiana and Kapurthala DCCB with 37.87 percent and 29.72 percent respectively. Whereas Muktsar DCCB was having minus growth in the ratio at the compounded annual rate of -214.94 percent followed by SAS Nagar and Fatehgarh Sahib DCCB with compounded rate of -73.27 percent and -26.62 percent respectively. The DCCBs with high ratio and high growth rate are required to take adequate action to reduce NPAs.

- **SUB STANDARD ASSETS TO TOTAL ADVANCES RATIO**

Gurdaspur DCCB had highest mean ratio of sub standard assets to total advances ratio of 8.81 percent followed by Amritsar DCCB and Mansa DCCB with mean ratio of 6.57 percent and 6.31 percent respectively whereas Sangrur DCCB had least mean value of 1.43 percent followed by Ferozepur DCCB with 1.89 percent and Moga DCCB with 1.89 percent.

Fazilka was having highest growth rate of -1.14 percent compounded annually in this ratio followed by Muktsar DCCB and Mansa DCCB with growth rate of -1.42 percent and -4.13 percent respectively. While Fatehgarh Sahib DCCB had lowest growth ratio of substandard assets to total advances i.e. -19.30 percent compounded annually followed by Ludhiana DCCB with -20.95 percent and Amritsar DCCB with

-21.80 percent. The DCCBs with the higher mean ratio and higher growth rate should be vigilant and recovery should be fast from these advances.

- **DOUBTFUL ASSETS TO TOTAL ADVANCES RATIO**

Amritsar DCCB was having highest mean ratio of doubtful assets to total advances i.e. 6.26 percent followed by Gurdaspur DCCB with mean ratio of 4.89 percent and SAS Nagar with mean ratio of 3.48 percent. whereas Nawanshahar DCCB was having least mean ratio i.e. 0.39 percent followed by Jalandhar DCCB with mean ratio of 0.46 percent and Fatehgarh Sahib with mean ratio of 0.52 percent.

Sangrur DCCB was showing higher growth in the ratio at 29.52 percent compounded annually followed by Mansa DCCB with growth rate of 27.50 percent and Kapurthala DCCB with compounded annual growth of 19.36 percent. The declining rate was observed in ratio by Ferozepur DCCB at the compounded annual growth rate of 17.49 percent followed by Fatehgarh Sahib at the growth rate of 6.79 percent and Faridkot DCCB at the growth rate of 5.83 percent. The DCCBs with high proportion of doubtful assets in total advances and high growth rate should have to make speedy recovery of their doubtful advances.

- **LOSS ASSETS TO TOTAL ADVANCES RATIO**

Three DCCBs with highest mean ratio of loss assets to total advances were Tarn Taran DCCB, Fatehgarh DCCB and Gurdaspur DCCB with mean ratio of 3.57 percent, 2.34 percent and 2.21 percent respectively. While the DCCBs with lowest mean ratio were Muktsar DCCB, Moga DCCB and Fazilka DCCB with mean value of 0.12 percent, 0.35 percent and 0.45 percent respectively.

The highest growth rate in the loss assets to total advances ratio was shown by SAS Nagar with growth rate of 17.92 percent compounded annually followed by Fazilka DCCB with growth rate of 13.44 percent and Ferozepur DCCB with growth of 4.08 percent compounded annually. While Hoshiarpur DCCB was having negative compounded annual growth of 24.97 percent followed by Jalandhar DCCB and Kapurthala DCCB with compounded annual growth of -18.93 percent and -18.25 percent respectively in the loss assets to total advances ratio.

- **EARNING ASSETS TO TOTAL ASSETS**

Patiala DCCB had highest mean ratio of earning assets to total assets i.e. 94.71 percent and it was followed by Jalandhar DCCB and Faridkot DCCB with mean ratio of 93.81 percent and 93.75 percent respectively. On the other hand, Ludhiana

Table 5.9 Showing Composite Ranking of DCCBs in terms of Asset Quality

S. No	DCCB	Gross NPAs to Gross Advances (%)	Net NPAs to Net Advances (%)	Sub Std Assets to Total Advances (%)	Doubtful Assets to Total Advances (%)	Loss Assets to Total Advances (%)	Earning Assets to Total Assets (%)	Total Ranking	Rank
1	Amritsar	19	19	19	20	9	17	103	17
2	Bathinda	5	11	11	5	4	13	49	4
3	Faridkot	9	16	10	13	6	3	57	7
4	Fatehgarh Sahib	10	13	9	3	19	7	61	9
5	Fazilka	8	14	6	17	3	5	53	5
6	Ferozepur	7	12	2	8	13	11	53	5
7	Gurdaspur	20	20	20	19	18	16	113	18
8	Hoshiarpur	13	8	13	11	11	9	65	10
9	Jalandhar	3	3	8	2	8	2	26	2
10	Kapurthala	2	2	7	4	5	6	26	2
11	Ludhiana	12	5	4	12	16	20	69	13
12	Mansa	18	18	18	15	12	19	100	16
13	Moga	4	7	3	14	2	18	48	3
14	Muktsar	14	6	16	16	1	15	68	12
15	Nawanshahar	1	1	5	1	7	8	23	1
16	Patiala	11	15	12	6	14	1	59	8
17	Ropar	15	4	14	9	15	10	67	11
18	Sangrur	6	9	1	7	17	14	54	6
19	SAS Nagar	16	10	17	18	10	4	75	14
20	Tarn Taran	17	17	15	10	20	12	91	15

Source: Calculated from various computed values

DCCB was having lowest mean ratio of 76.55 percent followed by Mansa DCCB and Moga DCCB with mean ratio of 87.21 percent and 88.37 percent respectively.

Bathinda DCCB was having highest compounded annual growth at the rate of 0.72 percent followed by Fazilka DCCB and Tarn Taran DCCB with growth rate of 0.44 percent and 0.44 percent compounded annually in earning assets to total assets ratio. While Moga DCCB was having least growth at the compounded annual rate of -2.37 percent and it was followed by Ludhiana and Gurdaspur DCCB with growth rate of -1.71 percent and -0.12 percent respectively in the ratio. The study of this ratio depicted that majority DCCBs had invested their money in earning assets.

- **COMPOSITE RANKING OF DCCBs IN TERMS OF ASSET QUALITY RATIOS**

Table 5.9 shows the overall ranking of DCCBs in terms of asset quality. Above analysis clearly establishes that Nawanshahar, Kapurthala and Jalandhar DCCBs had managed their asset quality effectively. These banks had location benefit also as they are operating in cash rich NRI belt of Punjab. On the other hand Gurdaspur, Amritsar. Mansa and Tarn Taran DCCB had not managed their asset quality properly and needs immediate surgical operations to improve their asset portfolio.

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