

FINANCIAL VIABILITY AND PERFORMANCE EVALUATION OF CO-OPERATIVE CREDIT INSTITUTIONS IN HARYANA (INDIA)

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ABSTRACT

Co-operative Banks are organized and managed on the principals of co-operation, self-help, and mutual help. These have been playing imperative role in Indian financial system with broad network in both urban and rural areas. Around three hundred and seventy two District Central Co-operative Banks (DCCBs) with large number of branches and extension counters cater to the needs of nearly one lakh societies in rural India. In Haryana nineteen DCCBs with more than two hundred branches have been facilitating self-sufficiency in food grain production, creation of

better employment opportunities and organizational strength to the rural people through banking services. Recently, the scams in co-operative sector, failure and closure of unviable branches, imposition of penalty by the regulators and payment of heavy money claims due to bankruptcy of co-operative banks etc. are few significant reasons which persuade to inquire into the financial affairs of these institutions. Many co-operative banks became insolvent and others are on the brink of mergers or acquisition. The present study was conceptualized to examine the financial viability, efficiency and performance of four DCCBs operating in Gurgaon division in Haryana (India), viz. Gurgaon, Faridabad, Mahendergarh and Rewari for a period of twelve years (1997-98 to 2008-09) by financial analysis and z-score analysis. The financial parameters here taken are profitability, liquidity, efficiency, solvency, risk and bankruptcy. The results reveal that four DCCBs with approximately fifty branches have not been performing well on all financial parameters taken for study. The banks performed well on one parameter but deteriorated on another and in different years as well. All the banks have been a part of bankruptcy zone (weak performance zone) throughout the study period. The banks need to visualize their operations, policies and strategies for effective utilization of available financial and human resources. The banks should amend their vision and act accordingly for sustenance in fierce competitive financial environment.

Keywords : Co-operative Credit Institutions, Profitability, Liquidity, Solvency, Efficiency, Risk, Financial Viability, Bankruptcy

INTRODUCTION

Co-operative credit institutions are an important part of Indian financial system and are engaged in different activities namely production, processing, marketing, distribution, servicing and banking with vast and powerful superstructure. In three tier structure of working, District Central Co-operative Banks (DCCBs) operate in the middle/district level by providing finance to the primary credit societies, accepting of deposits, granting of loans/advances, fixed deposit

receipts, gold/bullion, goods and documents of title of goods, collection of bills, cheques, safe custody of valuables and agency services. The financial situation of co-operative banks in India cannot be claimed sound at present. Many banks became insolvent and others are on the verge of mergers or acquisition. Various scams have been surfaced in 2001-02 in co-operative sector which had given a big jolt to the banking sector. In 2005-06, the RBI cancelled licenses of 14 Urban Co-operative Banks and DICGC made a payment of Rs. 565 crore towards the settlement of depositor's claims. During 2006-07, as many as 25 co-operative banks closed operations resulting into a payout of Rs. 438 crore by the insurer towards settlement of depositors' claims. In the year 2007-08, failing co-operative banks have cost Reserve Bank's credit insurance arm dearly as it had to shell out over Rs. 123.37 crore towards payment to depositors of 17 insolvent banks. The Reserve Bank's credit insurance arm has paid over Rs. 142 crore to depositors of 19 co-operative banks that have gone bankrupt till March 2009. As 32 Co-operative Banks failed between January and December 2009, Rs. 482 crore has been paid by DICGC to settle the dues of the depositors.

Keeping in mind the vulnerable situation of the co-operative banks, many committees suggested for revitalization of co-operative banks and Government announced the financial package of Rs. 14,839-crore as suggested by A.Vaidyanathan panel. NABARD has been the implementing agency for the Revival package for the Short Term Co-operative Credit Structure. As indicated in the annual policy statement of April 2008, the Government approved a package and Rs 4,740 crore has been released by the NABARD.

However, co-operative banks have made a commendable progress in extending its geographical spread and functional reach, yet huge decline in productivity and efficiency, erosion of profitability, unrealizable debts and increase in unviable branches have been seen inspite of Government help. Considering these facts, probing into the financial and operational aspects of these institutions becomes significant. In the present study it is tried to investigate into the financial and operational affairs of Four Central Co-operative Banks operating at district

level in Gurgaon division with focus on Profitability, Liquidity, Solvency, Efficiency, Risk and Viability for twelve year period (1997-98 to 2008-09).

The present study has been divided into four sections. First section covers brief review of the relevant literature. Objectives of the Study and Research Methodology are covered in second section. Third section covers Results and Discussion part and in the fourth section Conclusion and suggestions are made.

SECTION-I: REVIEW OF LITERATURE

Various studies conducted and numerous suggestions were sought to bring effectiveness in the working and operations of financial institutions. Narsimham Committee (1991) emphasized on capital adequacy and liquidity, Padamanabhan Committee (1995) suggested CAMEL rating (in the form of ratios) to evaluate financial and operational efficiency, Tarapore Committee (1997) talked about Non-performing assets and asset quality, Kannan Committee (1998) opined about working capital and lending methods, Basel committee (1998 and revised in 2001) recommended capital adequacy norms and risk management measures, Kapoor Committee (1998) recommended for credit delivery system and credit guarantee and Verma Committee (1999) recommended seven parameters (ratios) to judge financial performance and several other committees constituted by Reserve Bank of India to bring reforms in the banking sector by emphasizing on the improvement in the financial health of the banks.

Experts suggested various tools and techniques for effective analysis and interpretation of the financial and operational aspects of the financial institutions specifically banks. These have focus on the analysis of financial viability and credit worthiness of money lending institutions with a view to predict corporate failures and incipient incidence of bankruptcy among these institutions. **Urs and Chitambaram (2000)** studied performance of 14 District Central Co-operative Banks (DCCBs) in Kerala on 23 parameters and found inefficiency in their operations with lower capital and poor deployment of funds in the DCCBs. **Bhaskaran and Josh (2000)** concluded that the recovery performance of co-operative credit institutions continues to be

unsatisfactory which contributes to the growth of NPA even after the introduction of prudential regulations. They suggested legislative and policy prescriptions to make co-operative credit institutions more efficient, productive and profitable organization in tune with competitive commercial banking. **Jain (2001)** has done a comparative performance analysis of District Central Co-operative Banks (DCCBs) of Western India, namely Maharashtra, Gujarat and Rajasthan and found that DCCBs of Rajasthan have performed better in profitability and liquidity as compared to Gujarat and Maharashtra. **Singh and Singh (2006)** studied the funds management in the District Central Co-operative Banks (DCCBs) of Punjab with specific reference to the analysis of financial margin. It noted that a higher proportion of own funds and the recovery concerns have resulted in the increased margin of the Central Co-operative Banks and thus had a larger provision for non-performing assets. **Mavaluri, Boppana and Nagarjuna (2006)** suggested that performance of banking in terms of profitability, productivity, asset quality and financial management has become important to stable the economy. They found that public sector banks have been more efficient than other banks operating in India. **Pal and Malik (2007)** investigated the differences in the financial characteristics of 74 (public, private and foreign) banks in India based on factors, such as profitability, liquidity, risk and efficiency. It is suggested that foreign banks were better performers, as compared to other two categories of banks, in general and in terms of utilization of resources in particular. **Campbell (2007)** focused on the relationship between nonperforming loans (NPLs) and bank failure and argued for an effective bank insolvency law for the prevention and control of NPLs for developing and transitional economies as these have been suffering severe problems due to NPLs. **Singla (2008)** emphasized on financial management and examined the financial position of sixteen banks by considering profitability, capital adequacy, debt-equity and NPA. **Dutta and Basak (2008)** suggested that Co-operative banks should improve their recovery performance, adopt new system of computerized monitoring of loans, implement proper prudential norms and organize regular workshops to sustain in the competitive banking environment. **Chander and Chandel (2010)** analyzed the financial efficiency and viability of HARCO Bank and found poor performance of the bank on capital adequacy, liquidity, earning quality and the management efficiency parameters.

Centric to the ratio analysis, these studies have customized and blended financial ratios in a model form to examine and predict the financial health. Similarly, comparative performance, recovery performance, cost reduction, productivity and efficiency are vital areas which have been considered by various analysts. With inquisitiveness the present study has been undertaken with specific objectives as envisaged in the next section.

SECTION-II: OBJECTIVES AND RESEARCH METHODOLOGY

The study under consideration proposes to achieve the following objectives:

1. To study and examine the financial performance and efficiency of District Central Co-operative Banks operating in Gurgaon division in Haryana comprising of Gurgaon, Faridabad, Mahendergarh and Rewari.
2. To study and examine the financial viability of these DCCBs.
3. To suggest measures for augmenting working and operations in these DCCBs.

RESEARCH METHODOLOGY

Haryana state has been divided into four divisions, A) Ambala division, which covers six districts, B) Rohtak division, which covers five districts, C) Hisar division, which covers four districts and D) Gurgaon division, which covers four districts. In the present study four districts central co-operative banks (DCCBs) of Gurgaon division has been covered. The study encompasses twelve year period, from financial year 1997-98 to 2008-09. The requisite data has been obtained from the published financial statements of banks. An attempt is made to analyze five key financial areas (profitability, liquidity, solvency, efficiency and risk) considering the data from financial statements. Under each of these five categories of analysis four different ratios are calculated and analyzed. After calculating the average of the ratio (Mean), Standard Deviation, t-value and f-value have also been calculated to deepen the study.

Profitability Analysis- In the present study the profitability of DCCBs is tested with four profitability ratios. These are I) Net worth ratio (Net Profit after Tax to Total Shareholders'

funds), II) Return on Capital Employed (Net Profit after Tax to Total Assets), III) Profit Margin (Net Profit to Total Income) and IV) Net Interest Margin (Interest margin to Total Assets).

Liquidity Analysis- The liquidity of DCCBs is tested with four liquidity ratios. These are I) Cash-Assets ratio (Cash plus bank balance to Total Assets), II) Cash-Deposit ratio (Cash to Total Deposit), III) Cash-Demand ratio (Cash to Demand Deposit) and IV) Working funds to Assets ratio (Net Working Capital to Total Assets).

Solvency Analysis- The solvency is tested with four solvency ratios. These are I) Debt-Equity Ratio (Outsiders funds to shareholders funds), II) Capital Gearing Ratio (Owner's funds to Total fixed interest bearing liabilities), III) Outside Liabilities to Total Assets (Total Borrowings to Total Assets), IV) Fixed Assets to Total Net worth ratio (Fixed Assets to Total Capital).

Efficiency Analysis- To measure the efficiency of DCCBs four ratios are calculated, viz. I) Operating Efficiency (Total Operating Expenses to Total Assets), II) Cost of funds (Total Interest Expenses to Total Borrowings), III) Income productivity per employee (Net Income after tax to Total Employees) and IV) Overhead Efficiency (Burden) ratio (Non-Interest Income to Non-Interest Expenses)

Risk Analysis- Four key ratios are applied to test risk level in DCCBs, these are- I) Equity Ratio (Total Equity to Total Assets), II) NNPA to Sales (Net Non Performing Assets to Total Advances), III) GNPA to Sales (Gross Non Performing Assets to Total Advances) and IV) GNPA to Asset Ratio (Gross Non Performing Assets to Total Assets).

Bankruptcy and Financial Viability Analysis- After making above analysis, it has been tried to evaluate the financial health and viability of these banks by using **Altman Z-Score model**. Altman (1968) coined a multivariate Z-score analysis to assess financial health and to predict bankruptcy. It has been considered a powerful diagnostic tool that forecasts the bankruptcy. The model is defined as: $(Z = 1.2X_1 + 1.4X_2 + 3.3X_3 + 0.6X_4 + 0.999X_5)$ wherein, the variables X_1 to X_4 are computed as percentage values while X_5 variable is obtained in number of times and signify as: X_1 is the ratio of working capital to total assets, X_2 is the ratio of retained earnings to total assets, X_3 is the ratio of earnings before interest and tax to total assets, X_4 is the ratio of market value of equity to book value of debt, X_5 is the ratio of sales to total assets. The model

discriminate the sampled unit(s) in three categories in terms of Z-score output in relation to the financial performance.

Category	Z-score value	Inference/Implications
I	Below 1.8	Weak Performance/Bankruptcy zone
II	1.8 – 3.0	Healthy Performance
III	Above 3.0	Very Healthy/Sound performance

SECTION III: RESULTS AND DISCUSSION

However, the overall environment including agriculture, services, industry, facilities and working culture of people are similar in these districts yet the financial results differ from one bank to another as visible in the following discussion.

Profitability Analysis: However, principally, Co-operative banks do not pursue the goal of profit maximization yet they can make their operations properly and discharge their obligations to different segments of the society only through earnings or profits. Following four ratios have been calculated to measure profitability of the DCCBs of Gurgaon division.

Profitability Analysis of DCCBs in Gurgaon division during 1997-98 to 2008-09 (Table 1)

Ratio	DCCB	Average for DCCB (in %)	Average for the division	Std dev	t-value (sig 2t)	F-value (sig)
Net worth ratio (NWR)	Gurgaon	3.83 (1)	7.59	4.84	-0.002 (0.999)	3.711 (0.018)**
	Faridabad	8.32 (3)		6.09	0.000 (0.999)	
	Mahendergarh	10.6 (4)		5.51	-0.016 (0.988)*	
	Rewari	7.59 (2)		3.3	0.000 (1.000)	
on Capital Employed	Gurgaon	0.33 (1)	0.67	0.26	-0.045 (0.965)*	3.517 (0.023)**
	Faridabad	0.78 (2)		0.77	-0.004 (0.997)	
	Mahendergarh	0.98 (4)		0.54	-0.027 (0.979)*	

	Rewari	0.60 (3)		0.29	0.039 (0.969)*	
Profit Margin (PM)	Gurgaon	4.33 (1)	8.29	5.86	0.001 (0.999)	2.651 (0.060)**
	Faridabad	9.44 (3)		8.46	0.001 (0.999)	
	Mahendergarh	11.3 (4)		5.72	-0.017 (0.987)*	
	Rewari	8.1 (2)		4.22	-0.003 (0.997)	
Net Interest Margin (NIM)	Gurgaon	2.32 (2)	2.46	1.22	0.009 (0.993)	4.858 (0.005)**
	Faridabad	2.72 (3)		0.99	0.006 (0.995)	
	Mahendergarh	3.07 (4)		0.76	0.004 (0.997)	
	Rewari	1.71 (1)		0.54	0.021(0.983)*	

(*significant at 0.01 level and **significant at 0.05 level, Numeric (1-4) in braces are ratings as 1=worst and 4=best)

As depicted in table 1 all the DCCBs have scored very low NWR except Mahendergarh which scored highest 10.6%. The lower score reveal that the returns available to the shareholders on the capital invested have been very less and banks could not make proper use of capital. The dispersion in the ratios is highest in Faridabad (6.09) and Mahendergarh has significant t-value at 0.01 level. The ROCE has been very low in all DCCBs being highest in Mahendergarh (0.98) which signifies that all the banks are deficient in utilizing the total investments made in fixed and current assets and leading to generation of lesser returns. The variation in these ratios has been highest in Faridabad (0.77) and the t-values have been significant at 0.01 level for all banks except Faridabad. The rate of profit margin has been very less in Gurgaon (4.33) due to loss incurred in 2006-07 and lower returns in other years. It has been highest in Mahendergarh (11.3). It discloses that very less part of the total income is available to the owners in the form of profits and rest of the amount (more that 88%) has been incurred in expenditure. The deviation in ratios is highest in Faridabad (8.46) and the t-value has been significant in Mahendergarh at 0.01 level.

The average NIM has been highest in Mahendergarh (3.07) and lowest in Rewari (1.71) which reflects that the ratio of core income (income from lending operations) to income producing

assets has been very less throughout the study period. Net interest margin is the difference between total interest income and total interest expenses. It shows that the management of these banks has been unable to control the spread between interest revenue and interest costs, which lead to increase in interest costs. The variance is highest in Gurgaon (1.22) and t-value has been significant at 0.01 level in Rewari only. The f-value for the division has been significant at 0.05 level for all ratios. The profitability has been highest in Mahendergarh followed by Faridabad but very critical in Gurgaon and Rewari.

Liquidity Analysis: Liquidity refers to the ability of a concern to meet its current obligations as and when these become due. The short term obligations are met by realizing amount from current, floating or circulating assets. The current assets should either be liquid or near liquidity.

Liquidity Analysis of DCCBs in Gurgaon division during 1997-98 to 2008-09 (Table 2)

Ratio	DCCB	Average for DCCB (in %)	Average for the division	Std dev	t-value (sig 2t)	F-value (sig)
Cash Asset Ratio (CAR)	Gurgaon	3.65 (3)	2.91	0.76	0.422 (0.681)**	16.868 (0.000)**
	Faridabad	1.18 (1)		0.33	0.044 (0.966)*	
	Mahendergarh	2.99 (2)		1.15	0.000 (1.000)	
	Rewari	3.81 (4)		1.45	0.02 (0.998)*	
Cash Deposit Ratio (CDR)	Gurgaon	5.83 (2)	5.66	1.04	0.003 (0.998)	17.369 (0.000)**
	Faridabad	2.51 (1)		0.56	-0.015 (0.988)*	
	Mahendergarh	7.32 (4)		2.17	0.000 (1.000)	
	Rewari	6.97 (3)		2.68	-0.002 (0.998)	
Cash Demand Ratio (CDD)	Gurgaon	12.4 (3)	11.2	3.94	0.029 (0.978)*	22.048 (0.000)**
	Faridabad	3.21 (1)		0.84	0.007 (0.995)	
	Mahendergarh	17 (4)		5.82	-0.001 (0.999)	

	Rewari	12.2 (2)		4.74	0.005 (0.996)	
Funds Assets Ratio (WFAR)	Gurgaon	41.1 (4)	36.45	10.3	0.001 (1.000)	2.059 (0.119)**
	Faridabad	33.4 (1)		5.94	-0.016 (0.988)*	
	Mahendergarh	34.3 (2)		9.48	-0.002 (0.998)	
	Rewari	37 (3)		6.99	-0.007 (0.994)	

(*significant at 0.01 level and **significant at 0.05 level, Numeric (1-4) in braces are ratings as 1=worst and 4=best)

The higher Cash Asset Ratio reflects higher liquidity in the asset portfolio of a bank. It is evident from table 2 that the average CAR for the division and individually for all banks has been less than 4 percent which shows that liquidity position of these banks against assets has been very poor and critical. Lower liquidity may impact the creditworthiness negatively. The dispersion in the ratio is highest in Rewari (1.45). The t-values have been significant at 0.01 level in Faridabad and Rewari and at 0.05 level in Gurgaon. The cash deposit ratio (CDR) denotes the liquidity and payment capacity of the banks and it has been highest in Mahendergarh (7.32). The banks with lower ratio may face problem of timely payment to the depositors due to shortage of cash and ultimately may adversely affect the creditworthiness and profitability. The variance in the ratios is highest in Rewari (2.68) and the t-value has been significant at 0.01 level only in Faridabad. The availability of cash in proportion to the demand deposits is highest in Mahendergarh (17) and lowest in Faridabad (3.21) which reveals that banks can pay cash in the tune of 3-17 percent at a time out of total demand deposits. The situation should be improved in order to strengthen the liquidity position. The variance in the ratio is highest in Mahendergarh (5.82) and the t-value has been significant at 0.01 level in Gurgaon. Net working capital being the difference in current assets and current liabilities is a measure of pure liquidity in bank. The average ratio of Working Funds to Assets for the division has been 36.45. The higher ratio shows the better situation of working funds in the banks. The variance in the ratio has been highest in Faridabad (10.3). The t-value of the banks has been significant at 0.01 level in Faridabad and f-values of the division have been significant at 0.05

level for all ratios. However, liquidity position of all DCCBs needed to be improved yet it has been critical in Faridabad which requires immediate cash for sustenance of routine operations.

Solvency Analysis: The term 'solvency' refers to the ability of a bank to meet its long term obligations. The solvency ratios indicate a bank's ability to meet the fixed interest, costs and repayment schedules associated with its long term borrowings.

SOLVENCY ANALYSIS OF DCCBS IN GURGAON DIVISION DURING 1997-98 TO 2008-09
(TABLE 3)

Ratio	DCCB	Average for DCCB (in %)	Average for the division	Std dev	t-value (sig 2t)	F-value (sig)
Debt Equity Ratio (DER)	Gurgaon	245.9 (4)	396.75	100.5	-0.001 (0.999)	7.543 (0.000)**
	Faridabad	437.7 (2)		107.5	0.000 (1.000)	
	Mahendergarh	500 (1)		166.5	0.000 (0.999)	
	Rewari	403.4 (3)		158.6	0.000 (0.999)	
Outside Liabilities to Assets (OLTA)	Gurgaon	17.73 (4)	32.09	3.744	0.002 (0.999)	43.328 (0.000)**
	Faridabad	35.81 (2)		4.076	-0.001 (0.999)	
	Mahendergarh	44.8 (1)		8.512	-0.002 (0.998)	
	Rewari	30.03 (3)		6.799	-0.001 (0.999)	
Assets to Total Capital (ATC)	Gurgaon	521.8 (1)	360.2	313	0.000 (1.000)	6.571 (0.001)**
	Faridabad	310.7 (3)		94.98	0.000 (1.000)	
	Mahendergarh	222.4 (4)		45.55	0.000 (1.000)	
	Rewari	385.9 (2)		91.13	0.000 (1.000)	
Capital Gearing Ratio (CGR)	Gurgaon	46.46 (1)	30.32	16.11	0.001 (0.999)	12.439 (0.000)**
	Faridabad	24.54 (3)		7.996	0.002 (0.999)	
	Mahendergarh	21.79 (4)		6.028	0.000 (1.000)	

	Rewari	28.51 (2)		10.78	0.001 (0.999)	
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(*significant at 0.01 level and **significant at 0.05 level, Numeric (1-4) in braces are ratings as 1=worst and 4=best)

The DER has been very high for the Gurgaon division (396.75) and ranges between 200 and 500 percent in all the DCCBs which prove that there has been lower margin of safety for the creditors and the owners are enjoying the financial leverage which can be fatal for the banks in the coming future. The ratios depicted by all banks are not favorable for the long term creditors because high ratio gives a lesser margin of safety to them at the time of liquidation. The variance in the ratio has been highest in Mahendergarh (166.5) and t-values have been insignificant in all the banks. The banks with lower OLTA ratio are more solvent. It has been 32.09 for the division and lowest in Gurgaon (17.73) which evident availability of assets with the all the DCCBs to pay for outside liabilities. The banks with lower ratio signify that long term solvency of the banks is maintained but the banks with higher ratio should try to lower down this ratio for better solvency condition. Lesser outside liabilities lead to lesser payments and give more confidence to maintain higher solvency level. The dispersion has been highest in Mahendergarh (8.5) and t-values have been insignificant in all DCCBs. Ideally the FATC should be 60-65 percent but for the division it has been 360.2 which exemplify that the value of fixed assets has been much higher than the capital available and the assets probably purchased from the borrowed amount also, which make the situation more critical. The deviation has been highest in Gurgaon (313) and t-values have been insignificant. The fixed interest bearing securities are much higher than owner's funds and banks are highly geared. It ranges from 21 to 47 percent which imply the transfer of maximum profits into interest payments and very less amount is available to the owner's in the form of dividends. This situation can be fatal for the banks in the near future as there should be optimum capital structure in any business concern for long term sustenance. The variance in the ratio has been highest in Gurgaon (16.19) and the t-values of the banks have been insignificant in all banks. The f-values have been significant at

0.05 level in the division. All the DCCBs are required to make improvement in their solvency as the situation is critical in all the banks.

Efficiency Analysis: The efficiency ratios are calculated to measure the effectiveness with which funds are utilized in the business, how well the institution controls expenses relative to producing revenues, and how productive employees are in terms of generating income, managing assets and handling operations.

Efficiency Analysis of DCCBs in Gurgaon division during 1997-98 to 2008-09

(Table 4)

Ratio	DCCB	Average for DCCB (in %)	Average for the division	Std dev	t-value (sig 2t)	F-value (sig)
Operating Efficiency (OE)	Gurgaon	2.15 (3)	2.28	1.15	-0.008 (0.994)	0.649 (0.588)**
	Faridabad	2.14 (4)		0.73	0.008 (0.994)	
	Mahendergarh	2.28 (2)		0.74	-0.008 (0.994)	
	Rewari	2.54 (1)		0.37	-0.032 (0.975)*	
Burden Ratio (BR)	Gurgaon	6.19 (1)	20.39	9.08	0.000 (1.000)	71.822 (0.000)**
	Faridabad	9.63 (3)		12.6	0.000 (1.000)	
	Mahendergarh	7.93 (2)		9.78	0.001 (1.000)	
	Rewari	57.8 (4)		8.92	0.000 (1.000)	
Productivity per Employee (IPPE)	Gurgaon	0.4 (2)	0.61	0.6	-0.014 (0.989)*	1.797 (0.162)**
	Faridabad	1.16 (4)		1.93	-0.004 (0.996)	
	Mahendergarh	0.61 (3)		0.37	0.016 (0.988)*	
	Rewari	0.25 (1)		0.12	0.000 (1.000)	
unds	Gurgaon	25.8 (1)	16.43	6.55	-0.019 (0.986)*	34.341

	Faridabad	13.5 (3)		2.53	0.039 (0.970)*	(0.000)**
	Mahendergarh	11.6 (4)		2.38	0.104 (0.919)**	
	Rewari	14.8 (2)		1.34	-0.118 (0.908)**	

(*significant at 0.01 level and **significant at 0.05 level, Numeric (1-4) in braces are ratings as 1=worst and 4=best)

The lesser proportion of operating expenditure provides more profits to owners. It should be in zero decimal points only. The Gurgaon division has not been efficient on this front as the average ratio has been very high (2.28) being highest in Rewari (2.54). The variance in the ratio has been highest in Gurgaon (1.15). The t-value has been significant at 0.01 level in Rewari only. Burden Ratio reflects the efficiency of an institution to pay non-interest expenditure out of non-interest income. Higher ratio means lesser burden on interest income and the bank is earning more through fee based services as highest in Rewari (57.18). The burden of payment of non-interest expenditure has been higher on interest income as non interest income has been very less in other banks being lowest in Gurgaon (6.19). The variance has been highest in Faridabad (12.6) with insignificant t-values. The negligible amount of IPPE is an evidence for poor efficiency of the employees and management in all banks. The ratio being in the range of 0.4 to 1.16 percent connotes the poor efficiency to earn income in all DCCBs. The banks should emphasize on increasing the income by utilizing their manpower effectively. The variance in the ratio has been highest in Faridabad and the t-values have been significant at 0.01 level in Gurgaon and Mahendergarh. However, cost of funds depends upon the interest rates prevailing in the market, yet the banks can minimize it with efficient management and better predictions. CF has been lowest in Mahendergarh which connotes better efficiency in funds management. In all other banks it has been more than 12 percent. The variance has been highest in Gurgaon and the t-values have been significant at 0.01 level in Gurgaon and Faridabad and at 0.05 in rest. The f-values have been significant at 0.05 level. Faridabad and Mahendergarh have been quite efficient but Gurgaon and Rewari have been very critical and inefficient.

Risk Analysis: Banks face many risks including losses on loans and losses on investments. Financial managers must limit these risks in order to avoid failure of the banks (bankruptcy). Basel Committee on Banking Supervision (BCBS) in both the accords (Basel accord I and II) have given weight to capital adequacy and risk in banks.

Risk Analysis of DCCBs in Gurgaon division during 1997-98 to 2008-09 (Table 5)

Ratio	DCCB	Average for DCCB (in %)	Average for the division	Std dev	t-value (sig 2t)	F-value (sig)
Equity Ratio (ER)	Gurgaon	7.94 (1)	8.48	2.67	0.005 (0.996)	1.621 (0.198)**
	Faridabad	8.53 (3)		1.64	0.002 (0.999)	
	Mahendergarh	9.48 (4)		1.56	-0.011 (0.991)*	
	Rewari	7.97 (2)		1.71	0.002 (0.999)	
Gross NPA to Sales (GNPS)	Gurgaon	6.64 (2)	5.44	3.44	0.003 (0.997)	3.684 (0.019)**
	Faridabad	6.83 (1)		3.56	0.002 (0.999)	
	Mahendergarh	3.75 (4)		2.25	-0.001 (0.999)	
	Rewari	4.55 (3)		1.01	0.003 (0.998)	
Gross NPA to Assets (GNPA)	Gurgaon	4.25 (2)	3.93	2.35	-0.007 (0.994)	2.743 (0.054)**
	Faridabad	5.11 (1)		2.57	-0.003 (0.997)	
	Mahendergarh	3.05 (4)		1.75	-0.005 (0.996)	
	Rewari	3.29 (3)		0.63	0.009 (0.993)	
Net NPA to Sales (NNPS)	Gurgaon	2.7 (3)	2.98	3.28	0.000 (0.999)	0.929 (0.435)**
	Faridabad	3.82 (1)		2.8	-0.006 (0.995)	
	Mahendergarh	2.25 (4)		1.83	0.000 (1.000)	
	Rewari	3.15 (2)		1.02	-0.008 (0.993)	

(*significant at 0.01 level and **significant at 0.05 level, Numeric (1-4) in braces are ratings as 1=worst and 4=best)

Lesser equity ratio in the division (8.48) indicates lower capitalization in the banks in comparison to the assets and has been a risky situation. Total assets being 10 times greater than total capital, demonstrate that maximum amount invested in the assets has been the borrowed one and can adversely affect the creditworthiness of the banks. A bank with inadequate capital base remain in dwindling situation and face difficulty in making adequate use of assets for earning. The dispersion in the ratio has been highest in Gurgaon (2.67) and the t-value has been significant at 0.01 level in Mahendergarh only. The GNPS ratio has been a measure of effective sales in a bank and it should be less than 5 percent as prescribed by the RBI. However, it has been more than 5 % in Gurgaon and Faridabad, but the effective sales have been more than 93 % in all DCCBs. Due to implementation of loan waiver scheme by the Government in the year 2008, the NPA increased tremendously in 2008-09 and affected adversely all the banks. The variance has been highest in Faridabad (3.56). The t-values have been insignificant at 0.01 level in all DCCBs. The GNPA in total assets has been highest in Faridabad (5.11) and lowest in Mahendergarh (3.05) which reveal lesser risk in all the banks, however it can be further lower down. The dispersion in the ratio has been highest in Faridabad and the t-values have been insignificant at 0.01 level in all DCCBs. The ratio of Net Non Performing Assets (NNPA) to Total Advances should not be greater than 3 as per the RBI guidelines. It has been more than prescribed limit in Faridabad (3.82) and Rewari (3.15) which signals danger to the banks. The banks should emphasize more on better provisioning and careful lending in order to decrease the loss assets. The dispersion in the ratio has been highest in Gurgaon (3.28) and the t-values in all banks have been insignificant at 0.01 level but f-values for the division have been significant at 0.05 level. The risk level has been very high in Gurgaon and Faridabad, but quite well in Mahendergarh and Rewari.

It can be inferred from above discussion that banks in Gurgaon division have not performed well on all the parameters. One bank performed best on one parameter but worst on other which prove that the overall financial performance of the banks has not quite well and all

the banks have to make improvements on different fronts. In the following table total score and position attained by the banks is depicted.

Aggregate Score and position of DCCBs on five financial parameters (Table 6)

DCCB	Profitability Analysis (out of 16)	Liquidity Analysis (out of 16)	Solvency Analysis (out of 16)	Efficiency Analysis (out of 16)	Risk Analysis (out of 16)	Total (out of 80)	Position
Gurgaon	05	12	10	07	08	42	IV
Faridabad	11	04	10	14	06	45	III
Mahendergarh	16	12	10	11	16	65	I
Rewari	08	12	10	08	10	48	II

(One ratio carries maximum 4 points, 4 ratios = 16 points and 20 ratios = 80 points)

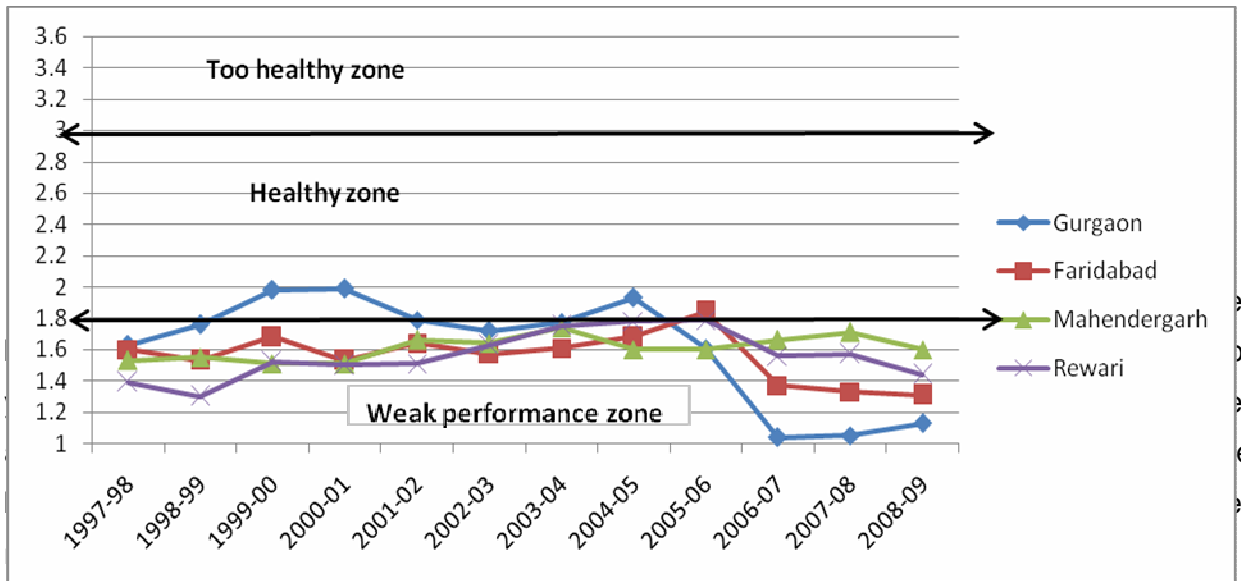
From table 6, it can be interpreted that in profitability analysis, the Mahendergarh has been the best performer with highest rating (16) followed by Faridabad (11). Gurgaon and Rewari have been the worst performers with lowest profitability ratios. The liquidity situation in the Gurgaon division has been weak but it has been highest in Gurgaon, Mahendergarh and Rewari with 12 points each and least in Faridabad. The solvency situation has been very weak and all the DCCBs have attained 10 points each. Mahendergarh has been least risky bank but the risk level has been very high in all other DCCBs. In overall rating, Mahendergarh scored the first position and declared as the best bank but Gurgaon has been the worst performing bank in the division. With above analysis the financial performance picture of the banks has been clear without doubts and to validate the results by checking the bankruptcy level Altman's Z-score analysis has been applied. The 'Z' scores with respect to District Central Co-operative Banks under study have been computed in following tables and are depicted in different performance zones in graphs/figures.

Z-score analysis of DCCBs in Gurgaon division during 1997-98 to 2008-09 (Table 7)

Z-Score Values of Four DCCBs in Gurgaon division													
DCCB	1997-98	1998-99	1999-00	2000-01	2001-02	2002-03	2003-04	2004-05	2005-06	2006-07	2007-08	2008-09	Mean
Gurgaon	1.63	1.76	1.98	1.99	1.79	1.72	1.77	1.93	1.61	1.04	1.05	1.13	1.62
Faridabad	1.6	1.53	1.68	1.53	1.64	1.57	1.61	1.68	1.84	1.37	1.33	1.31	1.56
Mahendergarh	1.53	1.55	1.51	1.51	1.66	1.64	1.74	1.6	1.6	1.66	1.71	1.6	1.61
Rewari	1.39	1.3	1.52	1.5	1.51	1.63	1.75	1.78	1.79	1.56	1.57	1.44	1.56

Graphical presentation of Z-score values of Gurgaon Division

(Figure 1)



SECTION IV: CONCLUSION AND SUGGESTIONS

However District Central Co-operative Banks (DCCBs) play pivotal role in the rural banking system yet failure/bankruptcy of these banks raise many doubts about their viability and sustenance. In the present study financial efficiency and performance of four DCCBs operating in Gurgaon division have been identified and analyzed on five parameters viz. profitability,

liquidity, solvency, efficiency and risk. The results reveal that banks performed better on one parameter but weakened on other which led to a dwindling situation. Mahendergarh CCB has performed well on profitability, liquidity and risk parameters but declined on efficiency and solvency parameters. Rewari needs to make improvements on all parameters but it performed well on liquidity. The profitability and efficiency have been quite better in Faridabad, but it should improve on all other fronts. Except liquidity, the Gurgaon has to make improvements on all other fronts. The derivation from the Z-score analysis reveals that all the banks have been declined to become a part of weak performance or bankruptcy zone. Long term sustenance and efficient operations have been big questions before these banks. Overall score depicts that Mahendergarh CCB has been the best and Gurgaon the worst one. In fact all the banks have been suffering from financial mismanagement and underutilization of resources, so these banks should change their vision and bring competitiveness besides transparency in their working to sustain and become vivacious co-operative credit institutions.

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