



## PERFORMANCE EVALUATION OF SELECTED CO-OPERATIVE BANKS OF JAMNAGAR WITH CAMEL MODEL

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### ABSTRACT

The Indian banking sector is a backbone of the Indian economy therefore it should be supervised more closely than any other business unit. Indian banking sector widely includes co-operative, commercial, nationalized, private and international banks in its fold. Cooperative banks play a unique role in the development of an agrarian economy. The main objective of cooperative banks is to provide timely and low cost advances to the farmers. Due to their importance in the development of economy, there is a great need to have close supervision of these banks. In the present study, an attempt has been made to analyze the performance of selected four Cooperative Banks of Jamnagar with the help of CAMEL Model.

CAMEL model is basically an approach widely used to measure the performance of banking unit in and outside India. This model measures the performance of financial institution especially banks, from all the important parameter like Capital Adequacy, Assets Quality, Management Efficiency, Earning Quality and Liquidity. The performance of these four Cooperative Banks has been examined in respect of Capital Adequacy and Asset Quality. For the purpose of study, secondary data for three years (2012-2015) has been taken from annual reports of these banks.

**KEYWORDS** : Asset Quality, Capital Adequacy, Cooperative, Performance Evaluation and Risk Weighted Assets.

### Introduction:

Various aspects of the Indian Banking sector have been highlighted in recent studies. Many of these refer to convergence and soundness of the sector. Convergence sector refer to the convergence between various categories of banks including public sector banks, old and new private sector banks, foreign banks etc. or to the convergence of the existing accounting standards in the country with the internationally accepted accounting standards (IFRS). Soundness is a key factor in any financial sector.

### Literature Review:

Manoj P. K. has written a paper on application of 'CAMEL' approach to OPBs with special reference to Kerala OPBs.

Ghosh examines the interplay between credit growth bank soundness and financial fragility in Indian banks. The soundness of banks is measured by their distance to default.

Sangmi, M. and Nazir, T. (2010) evaluated the financial performance of banks through CAMEL approach. Punjab National Bank and Jammu and Kashmir bank had been taken for the purpose of study.

### Research Methodology:

#### Objective:

- To analyze and interpret the financial performance of the selected banks.
- To compare financial performance of Co-operative banks of Jamnagar on the basis of ratios covered under CAMEL Model.
- To interpret the statistical results drawn out from the research and evaluate the usefulness of CAMEL model in doing so.
- To suggest measures, on the basis of the study result to improve further the financial performance of the banks under the study.

#### Scope of the study:

1. The Nawanagar Co-operative Bank Ltd.,
2. The Vardhman Co-operative Bank Ltd.,
3. The Jamnagar Peoples Co-operative Bank Ltd
4. The Mahila Co-operative Bank Ltd.

**Data Source:** The study is based on the data of the period from 2012-13 to 2014-15.

#### Capital Adequacy:

1. Capital Adequacy Ratio
2. Advances to Assets Ratio

3. G-secs to Total Investments Ratio

#### Assets Quality:

1. Gross NPA to Net Advances Ratio
2. Total Investments to Total Assets Ratio

#### Management Efficiency:

1. Total Advances to Total Deposits Ratio
2. Business per Employee Ratio
3. Profit per Employee Ratio

#### Earnings:

1. Net Profit to Average Assets Ratio
2. Interest Income to Total Income Ratio
3. Non-Interest Income to Total Income Ratio
4. Net Interest Margin to Total Assets Ratio

#### Liquidity:

1. Liquid Assets to Total Assets Ratio
2. G-secs to Total Assets Ratio
3. Liquid Assets to Demand Deposits Ratio
4. Liquid Assets to Total Deposits Ratio

#### Analysis & Interpretation

##### CAPITAL ADEQUACY

**Table 1.1 of Capital Adequacy Ratio**

Year	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	1.9830258 81	2.0562095 94	4.5939844 4	2.877739972	3
Vardhman	7.7964906 29	9.0342392 3	15.723099 87	10.85127658	1
JP	2.414638	2.423924	2.214445	2.351002243	4
Mahila	9.086876	9.508957	8.407539	9.001124244	2

As per the ratio Nawanagar bank had lended approx. 34% throughout previous three years. Vardhman Bank had lended approx. 25% to 30% of its total assets.

##### 2. G-secs to Total Investment:

**Table 1.3 of G-secs to Total Investments**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	96.774320 08	98.818246 2	99.149897 08	98.24748779	3

Vardhman	99.99855006	99.99810873	99.99810873	99.99825584	1
JP	99.99598	99.99628	99.99723	99.99649958	2
Mahila	96.13145	96.2509	97.08345	96.48859794	4

From the above table it can be seen that Vardhman & JP banks had invested maximum 99% of its investments in G-secs.

## ASSETS QUALITY

### 1. Gross NPA to Net Advances:

**Table 1.4 of Gross NPA to Net Advances Ratio**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	0.809901405	0.534668399	1.448173154	0.930914319	2
Vardhman	0.363243675	0.424340458	0.832681849	0.540088661	1
JP	2.515105	0.171196	0.945703	1.210667628	3
Mahila	4.695545	5.194071	4.229865	4.706493637	4

As per the above table it can be interpreted that the ratio of Vardhman bank was lowest which shows the better quality of advances.

### 2. Total Investment to Total Assets:

**Table 1.5 of Total Investments to Total Assets Ratio**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	42.72612913	39.80488429	48.40944829	Avg. %	Rank
Vardhman	25.82125909	19.71034717	19.73410104	43.64682057	1
JP	18.67611	18.46952	23.93611	21.75523577	2
Mahila	21.60466	21.05946	15.66887	20.36058217	3

As per the data it can be interpreted that in 2012-13 Nawanagar bank has invested highest 42% of its total assets and JP bank has invested lowest 18% of its total assets.

## MANAGEMENT EFFICIENCY

### 1. Total Advances to Total Deposits:

**Table 1.6 of Total Advances to Total Deposits Ratio**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	47.32113436	48.29254856	42.35892132	45.99086808	3
Vardhman	37.29424121	33.28812443	33.99255459	34.85830674	4
JP	56.67411	57.51755	53.81657	56.00274282	1
Mahila	52.65566	56.70372	53.87729	54.41222348	2

From the above calculation it can be interpreted that JP bank & Mahila bank was more aggressive in utilizing the funds as compare to other two banks.

### 2. Business per Employee:

**Table 1.7 of Business per Employee**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	30789600	50352000	45084000	42075200	1
Vardhman	15066000	14437000	13918000	14473667	2
JP	4608300	18393000	18150000	13717100	3
Mahila	2063220	11033000	10420000	7838740	4

From the above data it can be said that the employees of Nawangar bank generates highest business for the bank as compare to other banks.

### 3. Profit per Employee

**Table 1.8 of Profit per Employee**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	427000	983000	911000	773667	1
Vardhman	137000	154000	138000	143000	2
JP	18800	85000	177000	93600	3

Mahila	20400	77000	52000	49800	4
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The calculation shows that the employees of Nawanagar bank generate good profit for the bank which shows the efficiency of the management.

## EARNING

### 1. Net profit to Avg. Assets

**Table 1.9 of Net Profit to Avg. Assets Ratio**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	1.171961872	1.896810236	1.07030761	1.379693239	1
Vardhman	1.06035641	1.155050905	1.036379802	1.083929039	2
JP	0.354319	0.586818	1.169333	0.703490157	4
Mahila	0.090949	0.874647	1.147821	0.704472296	3

In 2012-13 Nawanagar bank generated highest profit from its avg. assets that is 1.17%.

### 2. Interest Income to Total Income

**Table 1.10 of Interest Income to Total Income Ratio**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	94.69555412	95.59711842	96.26196797	95.5182135	1
Vardhman	96.16385783	90.09631009	96.82800012	94.36272268	2
JP	86.84533	94.74672	84.75724	88.78309493	4
Mahila	90.48831	93.75683	90.65942	91.63485649	3

The above calculation shows that Nawanagar bank generated highest interest income as compare to other banks.

### 3. Non-Interest Income to Total Income

**Table 1.11 of Non-Int. Income to Total Income Ratio**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	5.304445881	4.402881578	3.738032033	4.481786497	4
Vardhman	3.836142169	9.903689908	3.171999884	5.637277321	3
JP	13.15467	5.253285	15.24276	11.21690507	1
Mahila	9.511686	6.243169	6.911013	7.555289504	2

It can be interpreted that in 2012-13 JP bank earned highest 13% interest income and Vardhman bank earned lowest non-interest income 3% as compared to other banks.

### 4. Net Interest Margin to Total Assets

**Table of Net Int. Margin to Total Assets**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	3.737170895	3.465639918	3.302126411	3.501645741	2
Vardhman	3.983112463	4.25624608	4.1431281	4.127495548	1
JP	0.656149	4.758631	4.897139	3.43730649	3
Mahila	2.988381	3.12597	2.179384	2.76457828	4

As per the Vardhman Bank's ratio was increasing, there was a significance change in JP bank's net interest margin to total assets and the ratio of Mahila bank was fluctuating.

## LIQUIDITY

### 1. Liquid assets to Total Assets

**Table 1.12 of Liquid Assets to Total Assets Ratio**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	16.08552195	19.43397359	14.738589	16.75269484	3

Vardhman	38.244838 32	49.064307 9	49.532830 75	45.61399233	1
JP	28.77294	27.9155	24.7602	27.14954631	2
Mahila	21.6916	15.71223	10.31659	15.90680626	4

From the above table it can be interpreted that the liquidity position of Nawangar bank was fluctuating year by year.

**2. Govt. Securities to Total Assets**

**Table 1.13 of G-Secs to Total Assets Ratio**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	41.347920 97	39.334488 56	47.997918 15	42.89344256	1
Vardhman	25.820884 7	19.709974 4	19.733727 81	21.7548623	2
JP	18.67536	18.46883	23.93545	20.35988249	3
Mahila	20.76888	20.26992	15.21188	18.75022573	4

From the above data it can be interpreted that G-Secs to total assets ratio of Nawangar bank was highest in all 3 years.

**3. Liquid Assets to Demand Deposits**

**Table 1.14 of Liquid Assets to Demand Deposits**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	1.7534264 88	2.3624823 29	1.8815903 08	1.999166375	2
Vardhman	2.7841628 46	3.5964949 63	3.4977584 11	3.292805407	1
JP	1.800592	1.61396	1.592042	1.668864528	4
Mahila	1.480953	2.467967	1.405201	1.784707008	3

It can be seen here that the Vardhman bank was having highest ability to meet the demand deposits in all the 3 years.

**4. Liquid Assets to Total Deposits**

**Table 1.15 of Liquid Assets to Total Deposit**

Bank	2012-13	2013-14	2014-15	Avg %	Rank
Nawanagar	21.728130 84	25.529900 29	19.023060 18	22.0936971	3
Vardhman	46.543181 18	60.757517 04	63.886287 24	57.06232849	1
JP	37.79861	36.2603	32.40753	35.48881198	2
Mahila	25.29664	20.30101	18.5732	21.3902824	4

From the above table it can be interpreted that the liquidity to the deposits of Nawangar bank was around 20%.

**Table 1.16 RATINGS AS PER CAMEL MODEL**

No.	Ratio	Banks			
		Nawa nagar	Vardh man	JP	Mahil a
<b>C</b>	<b>Capital Adequacy</b>				
	1.Capital Adequasy Ratio	3	1	4	2
	2.Debt-Equity Ratio	-	-	-	-
	3.Advances to Assets ratio	3	4	1	2
	4.G-secs to total investment ratio	3	1	2	4
	<b>Total (C)</b>	<b>9</b>	<b>6</b>	<b>7</b>	<b>8</b>
<b>A</b>	<b>Assets Quality</b>				
	1.Gross NPAs to net advances ratio	2	1	3	4
	2.Net NPAs to Net Advances	-	-	-	-
	3.Total Investments to Total Assets	1	2	3	4
	4.Net NPAs to Total Assets.	-	-	-	-
	<b>Total (A)</b>	<b>3</b>	<b>3</b>	<b>6</b>	<b>8</b>
<b>M</b>	<b>Management Efficiency</b>				
	1.Total Advances to Total Deposits	3	4	1	2
	2.Business per Employee	1	2	3	4
	3.Profit per Employee	1	2	3	4
	<b>Total (M)</b>	<b>5</b>	<b>8</b>	<b>7</b>	<b>10</b>

<b>E</b>	<b>Earnings</b>				
	1.Net Profit to Average Assets	1	2	4	3
	2.Interest Income to Total Income.	1	2	4	3
	3.Non-Interest Income to Total Income	4	3	1	2
	4.Net Interest Margin to Total Assets	2	1	3	4
	<b>Total (E)</b>	<b>8</b>	<b>8</b>	<b>12</b>	<b>12</b>
<b>L</b>	<b>Liquidity</b>				
	1.Liquid Assets to Total Assets	3	1	2	4
	2.Govt. Securities to Total Assets	1	2	3	4
	3.Liquid Assets to Demand Deposits	2	1	4	3
	4.Liquid Assets to Total Deposits	3	1	2	4
	<b>Total (L)</b>	<b>9</b>	<b>5</b>	<b>11</b>	<b>15</b>
	<b>Grand Total</b>	<b>34</b>	<b>30</b>	<b>43</b>	<b>53</b>
	<b>Rank</b>	<b>2</b>	<b>1</b>	<b>3</b>	<b>4</b>

**Analysis of the table of ratings:**

As per the ranks given to the selected banks it can be easily interpreted that the VardhmanBank is ranked as no. 1 among all other banks of Jamnagar, whereas Nawangarbank is ranked as no. 2, JP bank is ranked as no. 3 and Mahila bank is ranked as no. 4.

Rank 1 indicates that the Vardhmanbank's performance was very strong as compare to other banks; it also indicates that there are very minor weaknesses that can be easily handled by the board of directors.

The Nawangar bank is on the 2<sup>nd</sup> position which shows the satisfactory performance of the bank compare to other banks, the bank was performing stable. There are minor weaknesses that can be handled by the management.

Rank 3 indicates that the Jamnagar Peoples bank's performance was moderate as compare to all other banks; management can improve their performance.

Rank 4 indicates that the Mahila bank was showing poor performance among all other banks; there may be significant noncompliance with laws and regulations. The board of directors and management are not satisfactorily resolving the weaknesses and problems.

**FINDINGS & SUGGETIONS**

**Findings**

- In terms of Capital Adequacy Ratio, JP bank's ratio was more stable than any other banks. Ratio of Nawangar bank was increased throughout three years.
- Advances to assets ratio shows that Nawangar bank has decreased lending money as compare other banks, whereas JP bank is stable in lending money in last 3 years.
- G-secs to total investments ratio shows that all the co-operative banks of Jamnagar invested more than 90% funds in G-secs.
- As per the Gross NPAs to Net Advances ratio it can be found that the Vardhman Bank is having better quality of advances as compare to other banks.
- The total investment to total assets ratio indicates that Nawangarbank has conservatively kept a high cushion of investment to guard against NPAs.
- As per the total advances to total deposits ratio was found that JP & Mahila bank's management were highly efficient and able to convert its deposits into earning advances.
- It was also found that the employees of Nawangar Bank generated the highest business from last three years for the bank among all other banks.
- The surplus earned per employee is also highest of Nawangar bank. So it can be said that the employees of Nawangar bank are highly dedicated to their work and is positive sign for the bank.
- It was found that bank's earnings were highly dependent on interest income.

- The non-interest income of JP bank was less than 13%, whereas the non-interest income of other banks was less than 6%.
- Net profit to average assets ratio shows that JP & Mahila banks ratio was increasing which shows better potential of banks to earn profit in future as compare to other banks.
- Net interest margin to total assets ratio shows that Vardhman bank's investment decisions were successful as compared to other banks.
- From the liquid assets to total assets ratio it was found that the Vardhman bank was having better liquidity position as compare to other banks.
- As per the Liquid assets to Demand deposits ratio it was found that the ability of Vardhman bank to meet the demand from deposits was high as compare to other banks.
- Liquid assets to total deposits ratio measures that the Vardhman bank was having high liquidity available to the deposits of a bank.

### Suggestions:

At the end of the study I would like to suggest that banks which are not performing well should improve their performance in the market. Banks should understand the results and make necessary changes where it is required. Management of the banks should review the performance of the banks after every period of time.

### References

1. Manoj P.K., (2010), Financial Soundness of Old Private Sector Banks (OPBs) in India and Benchmarking the Kerala Based OPBs: A 'CAMEL' Approach, American Journal of Scientific Research, 11.
2. Ghosh Saibal, (2010) Credit Growth, Bank Soundness and Financial Fragility, Evidence from Indian Banking Sector, Munich Personal RePEc Archive, MPRA Paper No. 24715
3. Prasuna D G (2003), Performance Snapshot 2003-04, Chartered Financial Analyst, Vol. 10, No.11, pp.6-13.
4. Satish D, Jutur Sharath and Surender V, "Indian Banking Performance and Development 2004-05", Chartered Financial Analyst, Vol.11 (10), pp.6-15
5. Bhayani, S. (2006), Performance of the New Indian Private Sector Banks: A Comparative Study. Journal of Management Research, Vol. 5, No.11, pp.53-70.
6. Gupta, R. (2008), A CAMEL Model Analysis of Private Sector Banks in India. Journal of Gyan Management, Vol.2, No.1, pp. 3-8.
7. Richard S Barr et al. (2002), "Evaluating the productive efficiency and performance of US Commercial Banks", Managerial Finance 28(8), 3-25, Retrieved April 15, 2010 from ABI/INFORM Global.
8. Sarker A (2005) "CAMEL Rating System in the context of Islamic Banking: A Proposed S for Shariah Framework, Journal of Islamic Economics and Finance, 1(1), 78-84.
9. Kapil S and Kapil K N (2005), "CAEL's Ratings and its correlation to Pricing stocks – An Analysis of Indian Banks", University Journal of Bank Management, 4(1), 64-78.
10. Singh D & Kohli (2006), "Evaluation of Private Sector Banks in India: A SWOT Analysis", Journal of Management Research, 6(2), 84-101. Retrieved from April 10, 2010 from ABI/INFORM Global.
11. Mishra Kumar and Aspal Kumar (2011) "A Camel Model Analysis of State Bank Group", SSRN Online Journal.
12. Bodla, B.S. and Verma, R. 2006, 'Evaluating Performance of Banks through CAMEL Model: A Case Study of SBI and ICICI', The ICFAI Journal of Bank Management, Vol.5, No.3, pp.49-63.
13. Gupta, R. 2008, 'A CAMEL Model Analysis of Private Sector Banks in India', Journal of Gyan Management, Vol. 2, No. 1, pp. 3-8.
14. Satish, D; Jutur, Sharath and Surender, V 2005, 'Indian Banking Performance and Development 2004-05', Chartered Financial Analyst, Vol. 11, No. 10, pp. 6-15.

### Websites:

1. [www.nawanagarbank.co.in](http://www.nawanagarbank.co.in)
2. [www.rbi.co.in](http://www.rbi.co.in)
3. [www.investopedia.com](http://www.investopedia.com)
4. <http://www.moneycontrol.com/>
5. <http://www.bankingawareness.com/bankinggk/banking-history-in-india-post-independence-banking-history/>
6. [http://www.researchandmarkets.com/reports/402/indian\\_banking\\_industry](http://www.researchandmarkets.com/reports/402/indian_banking_industry)