

# EVALUATION OF COOPERATIVE BANKS IN HIMACHAL PRADESH USING CAMEL MODEL (Subjective weighted approach)

<sup>1</sup>Anil Sharma, <sup>2</sup>Dr. A.H. Khan

<sup>1</sup>Research scholar

<sup>2</sup>Supervisor, School of Commerce and Management

Indus International University, Una (HP)

DOI: <https://doi.org/10.5281/zenodo.17265435>

Published Date: 04-October-2025

---

**Abstract:** No doubt CAMELS performance analysis has been done before in world wide. A comparative analysis among the cooperative Banks has not been done so far. Present study is an attempt to fill this gap in this academic literature and make road to the other upcoming studies in the field of same area Cooperative banks plays a vital role in the economic growth of the state. They channel the funds from depositor to the investors (people) continuously .The main function of the Banks is to manage the risk not to avoid it. Sensible risk attract the good amount of profit to the stakeholder .As per census 2011, 95% of population of Himachal Pradesh lived in villages so cooperative banks had played important role in the development of state. At Present (2023-24) there are mainly 3 banks (cooperatives) operating in HP i.e. HP state cooperative bank Limited, Kangra central cooperative bank limited, Jogindra central cooperative. bank limited. CAMELS parameters are required some subjectivity to make it meaningful in Context o Cooperative Banks

**Keywords:** Cooperative banks, subjectivity, CAMELS parameters.

---

## 1. INTRODUCTION

### 1.1 Introduction

Banking is the major part of service sector. Major objectives such as capital formation ,infrastructure development ,employment and credit creation are performed by banking sector .So sound financial health of banking system are necessary for any developing country

Generally financial reforms and banking sector reforms go side by side in any country. The Indian banking industry begin in early 1990s. For the better check on the development of the economy, there must be a evaluating or supervision model for the banks. The camel model is used for evaluating the financial position of the bank and suggest the necessary steps to improve the bank's financial position. In the year 1995 Padmanabham committee recommend the camel model and this is the time when RBI adopted the camel model for Indian banking system .Which is based upon C (Capital adequacy),A (Asset quality),M (Management quality ),E(earning capacity) and L(liquidity position)

According to RBI Bank supervisors have legal power to collect extensive information about bank's financial health and strategies etc. which are normally not available to other stakeholders. The information gathered by the supervisor is used to identify current and potential problems that the bank face/may face for the supervisory attention and effective resource allocation.

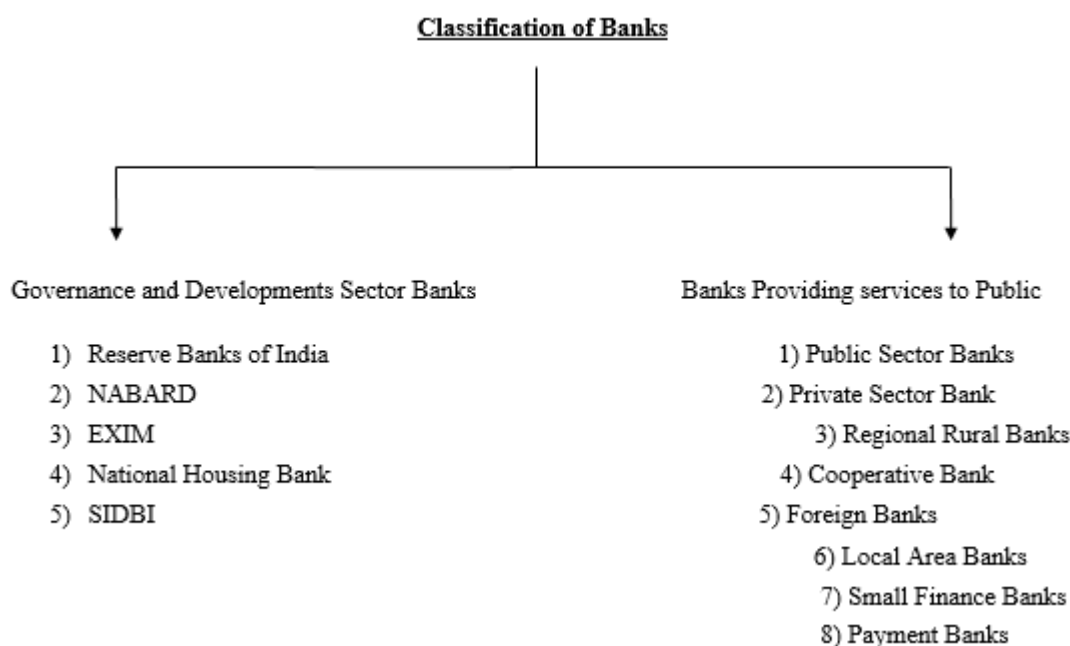
**1.2 Meaning Of Bank:** Banking industry is the backbone of any country's economy. The word bank is derived from "Banco" which means bench. If however, the word comes from a German word meaning ,"joint stock funds" where who

is taken in broader context with the passage of time it turned into a bank and according to Banking Regulation Act 1949 Bank means "A financial institution licensed by a government to undertake activities like borrowing and lending money." A number of other financial activities are allowed over time.

Banking as per section 5(1)b of the Banking Regulation Act 1949 defines banking as the accepting, for the purpose of lending or investment of deposits of money from the public, repayable on demand or otherwise withdrawal by cheque, draft, order or otherwise banking.

**1.3 Banking Company:** As per section 5(1) c define banking company as any company which transacts the business of banking in India.

#### 1.4 Banking structure in India.



#### **Governance and Development sector banks:**

Governance and development sector banks generally do not directly deal with the public. They control the bank and provide funding facilities time to time to the banks (providing services to the public)

**1) Reserve Bank of India:** RBI is an independent Bank of India and Central all other the bank on the behalf of the government. The Reserve Bank of India act was passed in 1934 to established the Reserve Bank of India .In first April 1935, in accordance with the provision of RBI act 1934 RBI was established. The central office of The reserve Bank was initially established in Kolkata but was permanently moved to Mumbai in 1937. Initially it was a private bank but later on in 1949 it was nationalized in 1949 as fully owned institution of government

**2) NABARD:** NABARD is a Apex Bank in the development of agriculture and development of village industry. It provides its services through the cooperative banks and regional rural banks to the general public. It provides regulating and supervisory functions to the Cooperative and regional rural banks. Head office of the bank is at Mumbai. It has 31 regional offices located at various States and union territories.

**3) EXIM Bank:** Export import Bank provide assistant to Indian exporter .The export import act was passed in September 1981 and the bank started its functions in the year 1982. It's head office is in Mumbai. The operations of bank are governed by the board of director. The board of director consists of a chairman, a managing director, two deputy managing directors, one director each nominated by RBI, IDBI and ECGC Limited.

**4) National housing Bank:** The national housing Bank was established on 9th July 1988. The National housing bill was passed by the parliament in 1987 and the President gave his assent in 1987. The national housing bank is wholly owned by the RBI. The main function of National housing Bank is the regulate the housing finance companies.

**5) SIDBI:** Small industries development Bank was established in 1990 and its main objective was to promote the small industries. This Bank also regulate and license micro small and medium enterprises finance companies. It also extends finance to other banks for promoting their objectives and also provide necessary training to general public.

**Public Sector banks:** public sector banks are those banks which are on and controlled by government. At present as on 01/03/2025 there are 12 public sector banks .In which 80% of paid up capital is subscribed by central government on the behalf of President of India.

**Private sector banks:** Private sector banks are those banks which are owned and controlled by the private people. At present there are 22 private banks in India .In which more than 50% of capital is subscribed by the private people

**Regional rural banks:** These banks was established in 1976 to provide finance for agriculture, for farmers and other trade activities in rural areas. At present there are 43 regional rural banks working in India .These banks are commercial bank as company in which 50% of paid up capital is subscribed by central government ,15% is subscribed by the state government and rest 35% subscribed by the concerned sponsored nationalized bank

**Cooperative banks:** The Cooperative movement in India start with the year 1904 in which Cooperative act was passed. In very beginning the main objective was to encourage the saving habits self help and cooperation between themselves. There are basically two types of cooperative banks. Rural Cooperative banks and Urban cooperative banks. Rural cooperative banks may further classified as District cooperative banks and State cooperative banks .At present there are 34 state cooperative banks ,352 district Centre cooperative banks and 1527 Urban cooperative banks working in India.

**Foreign banks:** foreign banks which are registered in foreign and having branches in India is known as foreign banks. At present there are 44 foreign banks working in India

**Payment sector banks:** Payment sector banks generally deals with small amount of a transaction generally rupee 1 lakh in a day limit .There are few payment sector banks working in India such as Paytm, Google pay Airtel pay and Whatsapp pay platform etc.

**Local area banks:** These are the banks who are allowed to work only in a local area by RBI. At present there are three local area banks

- 1) coastal local area Bank Limited
- 2) Krishna Bheema samriddhi local area Bank Limited
- 3) Subhadra local bank limited

**Small finance banks:** These banks are set up by government to provide the finance to the priority sector and it is mandatory by the RBI to provide the 75% of its credit to the priority sector. At present there are 12 small finance banks working in India

## 1.5 Conceptual framework

### Evolution of cooperative bank:

The word ‘evaluate’ comes from the French word evolver which comes from middle French word evaluation which means assessment and investigation

Banking system is the reflector of any country’s economy .If banking system is sound it means country’s economy is on the right direction. So it is the need of any banking system that there must be a evaluation system of the banks

**Camel rating system:** CAMEL model is an effective tool to measure the financial health of the bank

CAMEL framework was originally developed in the US by three banking supervisory that is Federal reserve, the FDIC and the OCC in order to examine the bank’S health. In this system, each banking system is evaluated by onsite examination on the basis of six (6) critical dimensions which is termed as a component of CAMEL approach .These are Capital adequacy (c), Asset quality (A), Management efficiency (M), Earning quality (E), liability (L), and sensitivity to market risk (S). There were about eight banks defaults (or bankruptcies) in the United states between 1965 and 1981 . Banks failures were especially common in 1980s, during savings and loan crisis. Banks all over the world were lending heavily, and countries external debts was rising at an high speed.

In order to avoid such large scale failures, the banking sectors were highly need a certain security and supervisory step. Basel Committee was set up for the purpose.

Belgium, Canada , france Germany ,Italy , japan , Luxembourg, The Netheralnd , Spain , Sweden, Switzerland , The United kingdom , and USA are the members of the commission .

Main Features of Basel Accord

It Was formed in the year 1988 and its aim was to

- 1) Improved the international Banking system
- 2) Create a fair and consistent international Banking framework to reduce competitive disparities between international Banks

Before this commission there was no single concepts of Capital and Bank's capital .There were three pillars of Basel Accord

First Pillars: It is concerned with the preservation of keeping the regulatory capital, which was based on three major component that a bank faces i.e. Credit Risk operating risk and market Risk. At this time other threats were considered constant

Second Pillar: It defines a mechanism for dealing with all other risks that a bank might face, such as systematic risk, concentration risk and strategic risk and legal risk, all of which are grouped under the word residual risk in the agreement .It enable the Banks to measure the risk Management.

Third Pillar: in the third pillar it was mentioned that the information that bank must disclose. This is done to give the market a clearer understanding of the bank's overall risk position. The new Basel Accord is built on three interlocking pillars that allows bank's supervisors to better assess the various risks that a Bank face during performing the functions.

During the onsite examination of institution supervisory authorities collect the essential information related to banking entity for rating their performance on the assigned rating scale of one (which means best) to 5 (which mean worst)

According to RBI Bank supervisors have legal powers to collect off site information about bank's financial health which are normally not available to the stakeholders of banks. The information gathered by the supervisor is used to identify current and potential problems that the bank face or may face in near future. This composite score is often termed as 'supervisory rating' and is exclusively used for supervisory purposes including interventions.

**1.6 Camel model in India:** Narsaimham Committee of the Indian government introduced a new banking reforms, with an emphasis on increasing bank's productivity and profitability. The Padmanabhan working group in India introduced two supervisory rating models foe Indian commercial Banks and Foreign Banks operating in India. CAMELS (Capital adequacy ,Assets Quality, Management , Earnings, Liquidity ,Systems and Controls ) and CACS ( Capital Adequacy , Assets Quality, Management, Earnings , Liquidity, System and Controls )

CAMEL system is beneficial even after accounting for a wide range of publically available knowledge about bank condition and performance. Banks may use the CAMEL method as a faliour prediction model. Both Quantitative and qualitative data are used to assesses the bank's ranking.

In study base CAMEL to evaluate the performance of all Nationalized Banks for the year 1988, Corporation bank was found to have the best ranking, followed by Oriental bank of Commerce, BOB, Dena Bank, PNB and others

The CAMEL method's main purpose is to identified the problems that a Banks's face and to compile comparative summary of their performances. CAMEL is a rating framework that is implemented by the bank's examiners. Generally ratings are assigned from 1 (best) to 5 (worst). CAMEL model has 6 parts capital adequacy (c), asset quality (A), management quality (M), earning quality (E), liability (L), and sensitivity to market risk (S).

**Capital adequacy:** it is based on the portion of asset founded by the capital. It indicates whether the bank has enough capital to absorb losses without severely damaging financial position. Following ratios are available to measure the capital adequacy of the financial institution

- 1) Total Equity / Total Asset
- 2) Total Equity / Total Liability
- 3) Total Equity / Total Loan

**Asset Quality:** Asset quality is one of the major aspects to measure the quality of a bank. Meaning of assets is different in banking organization as compared to other organization. In Banks, advance / loan given by banks is termed as asset. Advances loan are considered as assets due to the reason that it create interest as a income to the bank. The moment as bank Ceases to receive the interest amount up to 90 days. It is termed as Non performing assets (NPA) of the bank. Further NPA may be classified as Sub Standard assets, Doubtful and lost assets.

**Sub Standard Assets:** They are the assets which have remained NPA for a period less then or equal to 12 months .

**Doubt full Assets :** They are the assets which have remained Sub Standard Assets for a period 12 months .or remained NPA for more then 24 months.

**Lost assets:** A loss asset is one where loss has been identified by the bank or internal or external auditor or the RBI inspection ,but the amount has not been written off wholly.

To ascertain the asset quality following Ratios are used

- 1) Total Deposit / Total Assets
- 2) Fixed Assets / Total Assets
- 3) Total Loans / Total Assets

**Management Efficiency:** Management in the banks is different from the other organizations as it governess by the various laws . Good and efficient management is essential for the smooth and efficient working of the banks in long run. It is the third component of AMEL model. Following parameters are used to judge the management efficiency of the Bank

- 1) Net Profit / Staff Cost
- 2) Net Profit /Net interest Income
- 3) Net Profit / Total Loans

**Earning Quality:** Any commercial organization interested in it's earning as it is the only reason for they putting all efforts . In case of Banks depositors and investors are interested toknow the earning capacity of the banks .Banks are the true reflector of the country's economy .If bank's earning capacity is good then it means that country's economy is on the right track . Following parameters are used to measure the earning quality of the bank

- 1) Net Profit / Total Assets
- 2) Net Profit / Total Equity
- 3) Net Profit / Interest Income

**Liquidity:** It is the 5 th component of CAMEL model for analyzing the ranking of the Banks . Liquidity refers the bank's requirement of cash and cash equivalent to meet out it's demand. Adverse liquidity position will lead to ceases of bank . Following parameters are used for the liquidity positions of the bank.

- 1) Liquid Assets / Customer Deposits
- 2) Cash & Cash Equivalents / Total Assets
- 3) Customer Deposits / Total Assets

**Sensitivity to market risk:** It is the last Component Of the CAMEL model which measure an institution 's sensitivity to market risk. This 6<sup>th</sup> component was added by Federal Reserve and OCC in the year 1995 to address interest rate risk .In other word , sensitivity to market risk can be described as degree to which changes in interest rate ,foreign exchange rate, commodity price or equity price can adversely effect the earning / capital of a bank . following parameter can be used for the sensitivity analysis . Net Interest Income / Total Assets, Total Reserves / Total Assets and Total Investments / Total Assets

## 2. OBJECTIVES OF THE STUDIES

The main objective of the study is to evaluate the performance of the Cooperative Banks in Himachal Pradesh. Some other objectives are

1. To compare the financial performance of cooperative banks in Himachal Pradesh
2. To figure out in which aspects the banks are not performing well.
3. To compare financial performance of the Bank in different selected years

### 2.1 Importance of study

This study will be helpful to government, banker and customer to make a decision regarding their interest. Moreover, this study evaluates the performance of the banks in different angles using CAMELS performance parameters.

**2.2 Data Coverage:** In the study, data has been taken for 7 financial years ranging from financial year 2017-18 to 2023-24 and population size is cooperative banks working in Himachal Pradesh (Registered with Cooperative Society Act)

## 3. REVIEW OF LITERATURE

Satish D, Jutur S and Surender V (2005)<sup>1</sup> In their study titled "Indian Banking Performance and Development 2004-05". They evaluated the performance of 55 banks from 2004 to 2005. They used the CAMEL model for their analysis. In their study, they concluded that the Indian Banking system is sound in terms of Capital Adequacy, Asset Quality, Management Efficiency and Liquidity. They used secondary data for their study.

Bodla, B.S and Verma .R. (2006)<sup>2</sup>, in their study titled "Evaluating Performance of Banks through CAMEL model: A case study of SBI and ICICI". For the purpose of the study, they used secondary data from the period 2000-01 to 2004-05. CAMEL model was used for the study. In this study, they found that ICICI bank is good in terms of Asset Quality, Management Efficiency, Liquidity and Earning

Quality then the ICICI. SBI is good in terms of Capital Adequacy then the ICICI.

Brinda J and Dubey A.K (2007)<sup>3</sup>, In their study titled, "Performance of Public Sector Banks: An economical analysis" they used two parameters i.e. Return on Asset and operating profit ratio. In their study, they compared the public sector banks with Private and foreign Banks. They concluded that Public sector Banks are better performers than the Private Banks in terms of Asset Quality, Return on asset and Operating Profit.

Kannungo, S., Sadavarti, S and Yalapati, S. (2008)<sup>4</sup> In their study titled "Retaining IT strategy and Organisational Culture" they took the data of 72 Public Sector Banks. For the study purpose, secondary data was used. In their study, they concluded that good IT strategy is good for an organization structure (Culture) for the efficiency parameters.

Mihir Dash Alliance University Annyesha Das (2008)<sup>5</sup>. In their study titled, "A CAMEL analysis of the Indian Banking Industries" they used the CAMEL model for the study. As banking sector and Economic sector go side by side. After 1991 it was desired that Banking Sector must be sound in terms of Capital Adequacy, Asset Quality, Management Efficiency, Earning Capacity and Liquidity position. In the study, Private/ Foreign and five public sector Banks were compared on the basis of CAMEL model. Secondary data was used. It was found that in terms of Management Earning Capacity Private/ foreign Banks are good as compared to the Public Sector Banks. On the other hand, Public sector Banks are good in terms of Capital Adequacy.

Nazir, Tabassum. (2010)<sup>6</sup>. In his study titled "Analysis financial performance of Commercial Banks in India" he took the Punjab National Bank and Jammu and Kashmir Bank. CAMEL model was used for the study. Secondary data was used. It was concluded that Jammu and Kashmir Bank is good in terms of Capital Adequacy, Asset Quality, Management Efficiency, Earning Capacity and Liquidity then the Punjab National Bank.

Aggarwal Pankaj K (2011)<sup>7</sup> In his study titled "Performance of Public Sector Banks in the New Economy; A Comparison of Public Sector Banks." he used the CAMEL model to compare the performance of Public sector Banks and Private Sector Banks. He concluded that Public Sector Banks are better than the Private sector Banks in terms of Capital Adequacy. And in terms of Asset quality, management efficiency, earning capacity and Liquidity position. Private sector Banks are better.

S.M Tariq Zafar , Adeel Maqbool , Syed Imran Nabab Ali { 2012 }<sup>8</sup> in their study titled ,”A study of Ten Indian Commercial Banks financial performance using CAMELs methodology “. They used the secondary data . Period os study aws 2005 to 2010. In overall results Public Sector banks performed better then the private sector banks with respect CAMEL Parameters.

Parsad , K. V. N and Ravinder , G ( 2012 )<sup>9</sup>, In their study titled “A CAMEL model analysis of National Banks in India “ Secondary data was used to analysis the performance of @0 Nationalized Banks .It was concluded that Andra Bank was on the first position in ranking and Central Bank Of India was at bottom in terms of Financial Performance.

Channaveere Gowda B , Anand and Kumar Arun ( 2013)<sup>10</sup> .in their titled study “Bank Performance in India : A case study based on CAMEL framework “they used the financial statements for the pou[ose

The main objective of the study was to classify the different Commercial banks in India. In their study they took 26 Public sector banks, 18 Private sector banks and 15 foreign Banks. CAMEL model was used for the study. It was decided that Private sector Banks good in terms of Asset Quality as compared to other Banks. On the Other side in terms of Capital Adequacy management efficiency, Earning Capacity and Liquidity position. Public sector Banks are good in Comparison to others.

Research Methodology: Ratios were calculated as per Table one o the cooperative Banks working in Himachal Pradesh as per Table 1.1 and eights are given as per the table 1.1 . Then values are Put session wise in sample study of Banks. Results are put in Table 1.4 to get the final results.

**Table 1.1**

		Direction	Weight
<b>Capital Adequacy</b>			<b>.2</b>
C 1	Total Equity / Total Asset	+	0.4
C 2	Total Equity / Total Liability	+	0.4
C 3	Total Equity / Total Loan	+	0.2
<b>Asset Quality</b>			<b>.2</b>
A 1	Total Deposit / Total Assets	+	0.2
A2	Fixed Assets / Total Assets	+	0.3
A3	Total Loans / Total Assets	+	0.5
<b>Management Quality</b>			<b>.1</b>
M 1	Net Profit / Staff Cost	+	0.4
M 2	Net Profit /Net interest Income	+	0.3
M 3	Net Profit / Total Loans	+	0.2
<b>Earning Efficiency</b>			<b>.15</b>
E 1	Net Profit / Total Assets	+	0.2
E 2	Net Profit / Total Equity	+	0.2
E 3	Net Profit / Interest Income	+	0.6
<b>Liquidity</b>			<b>.25</b>
L 1	Liquid Assets / Customer Deposits	+	0.3
L 2	Cash & Cash Equivalentents / Total Assets	+	0.25
L 3	Customer Deposits / Total Assets	+	0.65
<b>Sensitivity</b>			<b>.1</b>
S 1	Net Interest Income / Total Assets	+	0.5
S 2	Total Reserves / Total Assets	+	25
S 3	Total Investments / Total Assets	+	0.25

Table no 1.2

Step	Process	Explanation
Step 1	Creating the Data set	For Creating the ata set o the study, 18 different ratios were used under six main Component ( CAMELS )
Step 2	Bank Value	Bank Values were calculated by Using the ratios mentioned above for each bank and each year .For our study
Step 3	Reference Values	Reference Values were calculated by getting the average value o all banks ratios in each year
Step 4	Calculating the Index value	It was calculated by dividing bank value by reference value then multiple the result by 100( Bank Value / Reference value ) *100
Step 5	Deviation Value	Every 18 ratios which are used in the calculation phase ,have either a positive sign or negative sign. I it is a positive sign ratio then(+)= (index value -100) if it is negative then (-)= (100- index value
Step 6	weighting the deviation value	For calculating the weighting the deviation ratio, we need to multiply deviation ratio by its ratio weight. In other words, need to multiply deviation ratio by its own weight ratio.( Deviation value *weight o the sub ratio.)
Step 7	Summing o weighted deviation value	Simply, we need to sum up weighted deviation values with each other under every component
Step 8	Finding group weight	every component needs to multiply by its group weights ( CAMELS )
Step 9	Component values	At the end o calculations , we have six ratios in our hand
Step 10	Total CAMELS value	we simply need to sum each other and reach the total CAMELS value .After that steps , we can make interpretations
Step 11	Evaluation and interpretations	The analyst gives points between 1 and five at the end of the evaluation. In the evaluation face , I means " demonstrated the best performance "and increasing of digits refers to the negativity of performance,'5' means " medium to heightened level of supervisory Concern

Table No 1.3

Ratio	Direction	weight	Bank Value	Reference Value	Index value	Deviation Value	Weighting	Index weighted Deviation Value	CAMEL Value	Total CAMEL Score
C		0.2								
CA1	+	0.4	0.000668	0.000846	78.98345	-21.0165	-8.40662	-22.5784	-4.51568	20.27478
CA2	+	0.4	0.000736	0.000905	81.32597	-18.674	-7.46961			
CA3	+	0.2	0.004742	0.007132	66.48906	-33.5109	-6.70219			
A		0.2								
AQ1	+	0.2	0.752601	0.781894	96.25358	-3.74642	-0.74928	-9.87689	-1.97538	
AQ2	+	0.3	0.001562	0.022532	6.932363	-93.0676	-27.9203			
AQ3	+	0.5	0.143829	0.104538	137.5854	37.58538	18.79269			
M		0.1								
MQ1	+	0.4	0.439063	0.455332	96.427	-3.573	-1.4292	-38.1967	-3.81967	
MQ2	+	0.3	0.085706	0.240934	35.5724	-64.4276	-19.3283			
MQ3	+	0.2	0.040684	0.317745	12.80398	-87.196	-17.4392			
E		0.15								
EQ1	+	0.2	0.005852	0.006806	85.98296	-14.017	-2.80341	-49.3323	-7.39984	

EQ2	+	0.2	8.578924	14.14785	60.63765	-39.3623	-7.87247		
EQ3	+	0.6	0.085706	0.240932	35.57269	-64.4273	-38.6564		
L		0.25							
LQ1	+	0.3	0.323526	0.4676	69.18862	-30.8114	-9.24341	-20.082	-5.02051
LQ2	+	0.25	0.243486	0.366772	66.3862	-33.6138	-8.40345		
LQ3	+	0.65	0.752601	0.781894	96.25358	-3.74642	-2.43517		
S		0.1							
SMR1	+	0.5	0.068275	0.050276	135.8004	35.80038	17.90019	430.0585	43.00585
SMR2	+	25	0.073157	0.062772	116.544	16.544	413.6		
SMR3	+	0.25	0.224313	0.23804	94.23332	-5.76668	-1.44167		

Table 1.4

Years	Bank Name		
	KCCB	HPCB	JCCB
2017-18	-38.99	74.75	-35.08
2018-19	-62.02	41.82	96.47
2019-20	65.28	35.46	29.81
2020-21	-86.7	65.46	19.18
2021-22	-67.23	74.4	-5.4
2022-23	-101.09	48.5	36.4
2023-24	-0.106	20.27	124.06
Total	-290.85	360.66	265.44
Average	-72.714	90.165	66.36

#### 4. FINDINGS

1) It is clear from the table no 1.4 that KCCB shows negative results as per the CAMEL parameters since 2017-18. The mains cause of this negative results that KCCB is not able to meet its capital adequacy norms. As far as other parameters are concerned such as management efficiency, earning quality and liquidity concerns they are little bit satisfactory. So management must ponder over the matter.

2) As clear from the table 1.3 it can be said that HPCB perform much better over the other cooperative banks in Himachal Pradesh. But there is less consistency in the results As it is clear from over the period of time.

3) It (JCCB) 2<sup>nd</sup> position in CAMELS parameters as it is clear rom the graph and table. As far as consistency is concerned in JCCB

**Limitation of the study:** As the meaning of capital is different in case of Cooperative Banks with comparison to the cooperative banks. So Some ratios (Capital adequacy) are used in subjective manner.

#### REFERENCES

- [1] Puruhit, P. B (2018). A CAMEL model analysis of selected Public and Private Sector Banks in India. ASAR international Conference.
- [2] Khatri D. K (2019). CAMEL rating system for Banks magnifying Lens – An empirical study in India. International Journal o Tourism and Hotel Business management;1(1), 15-27.
- [3] Pathan, T., Girase, M., Patel, K., Sadafara, A., Pathan, P. S., Parekh, P., Kuperkar, K. and Patel, V. I. (2024). Synergistic Self-Assembly in a Surface-Active Ionic Liquid and an Anionic Surfactant Mixed System: A comprehensive physicochemical analysis. *Ind. Eng. Chem. Res.*, 63(22), 9688–9700.
- [4] Rather, M. A., Rather, G. M., Pandit, S. A., Bhat, S. A., and Bhat, M. A. (2015). Determination of cmc of imidazolium based surface active ionic liquids through probe-less UV-vis spectrophotometry. *Talanta* 131, 55–58.
- [5] Sanchez-Fernandez, A., Hammond, O. S., Edler, K. J., Arnold, T., Douth, J., Dalglish, R. M., Li, P., Ma, K. and Jackson, A. J. (2018). Counterion binding alters surfactant self-assembly in deep eutectic solvents. *Phys. Chem. Chem. Phys.* 20, 13952–13961.

- [6] Sharma, R., Mahajan, S. and Mahajan, R. K. (2013). Influence of various additives on the physicochemical properties of imidazolium based ionic liquids: a comprehensive review. *Colloids Surfaces A Physicochem. Eng. Asp*, 427, 62–75.
- [7] Sharma, R. and Mahajan, R. K. (2014). Influence of various additives on the physicochemical properties of imidazolium based ionic liquids: a comprehensive review. *RSC Adv.*, 4, 748–774.
- [8] <http://hpsc.in>
- [9] <http://jccb.in>
- [10] <http://kccb.in>
- [11] JCCB Annual reports 2017 to 2023
- [12] KCCB Annual reports 2017 to 2023
- [13] HPCB Annual reports 2017 to 2023
- [14] [www. Moneycontrol. Com](http://www.moneycontrol.com)
- [15] Sheetal Sharma:, Economics (2025): Impact of Fintech adoption on bank performance using CAMEL model. A study on selected Indian Banks, *Journal of Information system engineering and management* 825-837.
- [16] Ms. M. Richitha:, Dr. RS Ch Murthy chodisetty (2023) Analysis of Bank Performance using CAMEL Model. *EPRA International Journal of Research & Development* role issue 1 (117-125).
- [17] Ioannis Malandrakis., Konstantinos Drakas (2021). Green Banks versus non-green Banks: A Financial stability comparative analysis in term of CAMEL Ratio DOI 10,102) ii jfe -3028.
- [18] Jha,S.,& Hui X. (2012). A Comparision of Financial Performance of Commercial Banks: A Case study of Nepal, *African Journal of Business Management*, 6(25) 7601-7611.
- [19] Khatri, D.K (2019). CAMEL Rating system for Banks & Magnifying lens an Emprical study in India. *International journal of Tourism & Hotel Business Management* 1(1) 15-27.
- [20] Cl. Ratio. *Journal of Research in Business, Economics & Management* 3(2) 161-171).
- [21] Satish D , Jutur S and Surender v( 2005 ) “ Indian Banking and Perormance and Development2004 -05 “ Charated Financial Analyst , special Issue Oct ,pp 6-29
- [22] Bondla , B S and Verma , R 2006 “ Evaluating Performance o Banks through CAMEL model “ A case study of SBI and ICICI , The ICFAI Journal of Bank Management , Vol. 5 , No 3 pp 49-63
- [23] Kannungo , S ., Sadavarti , S and Yalapati , s ( 2008 ) Retaning IT strategy and organizational culture A empirical study o public sector units in India .
- [24] Mihir Dash Alliance University Annyesha Das Pricewaterhousecoppers, India Bangalore A CAMELS analysis of the Indian banking industry *Electronic journal* DOI10.2139
- [25] Brinda J and Dubey A K ( 2007 ), “ Performance of Public Sector Banks : An Econometric Analysis “ *Indian Banker* , Vol 2 ,No12 pp 26-34
- [26] Nazir , Tabassum ( 2010 ) “Analysising Financial Performance Commercial Banks in India “ Application of CAMEL model, [etd.uum.edu.my/4587/7/s813769](http://etd.uum.edu.my/4587/7/s813769)
- [27] Aggarwal Pankaj K ( 2011 ) “Performance of Public Sector Banks in the New Economy , A comparision with the Private Sector Banks” *Bank Quest* , Vol 82 , No 4 pp 43-51
- [28] S, M, Tariq , Adeel Maqbool , Syed Imran ( 2012 ) A study of Ten Indian Commercial Bank’s Financial Performance using CAMEL model