Vol.2, Issue 2, October 2019 -March 2020
Online ISSN:2581- 6632

The Effects of Mergers and Acquisitions on the Performance of Commercial Banks in India

*** Ruby Agarwal** **** Sarita Vichore**

***** Maneesh Gupta**

ABSTRACT

The performance of the financial sector plays a vital role in the development of any economy. However, the performance of the banking industry in India over the years has been characterized by inefficiencies, a high regime of insolvency, serious incidence of distress, vulnerability to systemic financial crises and macro-economic instability. This study evaluated the effects of mergers and acquisitions on the performance of commercial banks in India with a particular interest in State Bank for India (SBI), ICICI Bank, HDFC Bank and Kotak Mahindra Bank. Using the Capital, Asset, Management, Earnings, and Liquidity (CAMEL) criterion, the research made use of secondary data, obtained from the bank's annual reports and statements of accounts. Covering a period of 10 years from 2008-2018, the work evaluated the performance of the bank before and after mergers and acquisitions, the using pair sample t-test. The results showed that mergers and acquisitions had positive, significant effects on the performance of private commercial banks than the public banks.

Key words: Mergers, Acquisitions, CAMEL, Banks, Incidence of Distress, Insolvency and Financial Performance

** MMS Student, DSIMS. Mumbai*
*** Associate Dean, Professor and HOD Finance, DSIMS, Mumbai*
**** Assistant Professor, DSIMS, Mumbai*

INTRODUCTION

The banking industry of any nation is the key driver of its economy. It is the prime mover of the economy as no economic activity will sail smoothly without adequate funds, the bulk of which is provided by the banking sector. Banks therefore occupy a significant place in the economy of every nation and should be given more attention than any other type of economic unit in an economy.

Banking industry plays a vital role in Indian financial system which contributes approximately 7.4% to India's GDP in 2019. Banks are considered as backbone for growth and development of an Indian economy. Indian Banking Sector is divided into four categories i.e. Public Sector Banks, Private Sector Banks, Foreign Banks in India and Co-operative and Regional Rural Banks. The Indian banks are anticipated to manage the large inflows and outflows of various resources which are of financial nature. For managing the inflow and outflow of financial resources a strong banking system through restructuring is needed. The banking sector of India is examined to be the biggest growing sector and the soundness of the banking system has been extremely important for the development of the country's economy. To meet this changing scenario the bank can adopt the plan of action like consolidation, Mergers and Acquisitions (M&A).

In 1991, there has been a paradigm shift in operations and functioning of financial sector in general and banking sector in particular with the opening up of Indian economy and adoption of liberalisation, privatisation and globalisation. This resulted in a considerable number of studies on M & A not only in India but worldwide. Incidentally, the Government of India along with the Reserve Bank of India have initiated mergers and acquisitions of the Indian banking sector with the anticipation that it would accrue benefits to the banks in terms of economies of scale and also make

an attempt to make the Indian banks more competitive and effective in the global market.

Today, the banking industry is counted among the rapidly growing industries in India. It has transformed itself from a sluggish business entity to a dynamic industry. The growth rate in this sector is remarkable and therefore, it has become the most preferred banking destinations for international investors. A relatively new dimension in the Indian banking industry is accelerated through mergers and acquisitions. It will enable banks to achieve world class status and throw greater value to the stakeholders.

The Purpose of this study is to evaluate the effect of M&As on the financial performance of merged commercial banks in India during 2008 - 2018 with particular reference to 4 banks i.e. State Bank of India (SBI), HDFC Bank, ICICI Bank and Kotak Mahindra Bank by using the CAMEL model.

CONCEPTUAL FRAMEWORK

1. **Definition of Mergers and Acquisitions:**

Merger:

A combination of two or more firms in which the assets and liabilities of the selling firm(s) are absorbed by the buying firm. (Sherman & Hart, 2006)

Varieties of Mergers and Acquisitions:

From the perspective of nature of business, according to Sherman and Hart (2006), M&As can be classified in the following manners.

- **Horizontal Merger** takes place when two firms that are in direct competition and share the same product lines and markets. Horizontal merger is generally a business consolidation that occurs between firms who operate in the same space, often as competitors offering the same

good or service. It is common in sectors where competition is higher and benefits of merging firms are greater on account of synergies and potential gains.

- **Vertical Merger** is a merger between two firms producing different goods or services for one specific finished product. It takes place in the form of two or more firms, operating at different levels within an organization's supply chain, merge their operations. The objective behind such transactions is to reduce costs or improve efficiency by merging synergies/processes under common management and ownership.

- **Conglomeration** is a merger between firms that are involved in totally unrelated businesses. Such transactions could be either pure or mixed conglomerates. Pure ones involve firms with nothing in common, while mixed conglomerate mergers relate to firms that are looking for product extensions or market extensions.

Acquisition:

It is the takeover of the ownership and management control of one company by another in which the buyer purchases an asset such as plant, a division or even an entire company' (Sherman and Hart, 2006).

2. CAMEL Model

In the 1980s, CAMEL rating system was first introduced by U.S. supervisory authorities as a system of rating for on-site examination of banking institutions. It has been proved to be a useful and efficient tool in response to the financial crisis in 2008 by the U.S. government. CAMEL approach is significant tool which describes the relative financial strength of a bank and to suggest necessary measures to improve weaknesses of a bank. In India, RBI adopted this approach in 1996 followed on the recommendations of Padmanabham Working Group (1995) committee. The reason being, the CAMEL model is adopted because it is the simplest model and it makes easy to compare the financial performance of a wide

range of banks. "CAMEL is basically a ratio-based model for evaluating the performance of banks by various ratios. CAMEL is an acronym for five components of bank safety and soundness.

(C)Apital Adequacy
(A)Ssets
(M)Anagement Capability
(E)Arnings
(L)Iquidity

Capital Adequacy- It is an important parameter for a bank to conserve and protect stakeholders, confidence and prevent the bank from bankruptcy. An institution’s capital adequacy depends on its growth plans, interest and dividend practices, ability to control risks and economic environment. Capital Adequacy reflects the overall financial condition of the banks and also the ability of management to meet the need for additional capital. Reserve Bank of India (RBI) prescribes banks to maintain minimum Capital to Risk Weighted Assets Ratio (CRAR) of 9% with regard to credit risk, market risk and operational risk on an ongoing basis, as against 8% prescribed in BASEL documents.

Asset quality- It covers an institutional loan’s quality which reflects the earnings of the institution. It is an indicator of healthiness of banks against loss of value in the assets as asset impairment risks the solvency of banks. The asset quality is assessed with respect to the level of non-performing assets, adequacy of provisions, distribution of assets etc. Asset quality indicates the type of the debtors the bank is having.

Management Efficiency- It refers to the capability of the management to ensure the safe operation of the institution as it complies with the necessary internal and external regulations. It reflects the capability of management to properly react to financial stress as well as to control and mitigate risks of the institution’s daily activities.

Earning Quality- It represents the sustainability and growth of future earnings of an institution as well as its competency to maintain quality and

retain competitiveness. Earnings quality is determined by assessing profitability, growth, stability, net interest margin, net worth level and the quality of the institution's existing assets.

Liquidity position- It is a measure of an institution's short-term solvency which enables it to
procure sufficient funds either by increasing liabilities or by converting its assets to cash quickly at a reasonable cost. Banks have to take proper care in hedging liquidity risk, while at the same time ensuring that a good percentage of funds are invested in higher return generating investments, so that banks can generate profit while at the same time provide liquidity to the depositors. Among a bank's assets, cash investments are the most liquid. A high liquidity ratio indicates that the bank is more affluent.

Table 1: Merger and Acquisition in the Indian Banking Sector from FY 2008-2018

Sr. No.	Transferee Bank	Transferor Bank	Date of Merger
1.1	State Bank of India	State Bank of Travancore (SBT)	March 31, 2017
2	State Bank of India	State Bank of Bikaner and Jaipur (SBBJ)	March 31, 2017
3	State Bank of India	State Bank of Hyderabad (SBH)	March 31, 2017
4	State Bank of India	State Bank of Mysore (SBM)	March 31, 2017
5	State Bank of India	State Bank of Patiala (SBP)	March 31, 2017
6	State Bank of India	Bhartiya Mahila Bank (BMB)	March 31, 2017
7.8	Kotak Mahindra Bank	ING Vyasa Bank	March 31, 2015
8.9	ICICI Bank	Bank of Rajasthan	August 13, 2010
9	HDFC bank	Centurion Bank of Punjab	February 25, 2008

LITERATURE REVIEW

Anderibom et al., (2015), examines the effect of Mergers and Acquisition on the performance of commercial banks in Nigeria with a particular interest in United Bank for Africa (UBA) Plc. using CAMEL Approach. The study uses secondary data which is obtained from the financial reports of banks. The author uses pre and post merger data by applying a paired sample t-test. The study reveals that M&A had positive and significant effect on the performance of commercial banks in Nigeria. **Brahma Chaudhari (2010)** made a comparative analysis of SBI and ICICI: CAMEL approach. The analysis reveals that both SBI and ICICI have been maintaining the required standard and running profitably. But with regard to profitability and management efficiency, ICIC bank has been a better performance as compared to SBI. **Dr. (Mrs.) Prashanta Athma, A. Bhavani (2017)** studies about Trends in Mergers in Banking Sector in India: An Analysis and resulted that there is a significant difference between the mergers of both (Private & Public) sectors and also indicating that the Public Sector Banks dominated the scenario of mergers. **Kalaichelvan K (2011)** analyzed the implication of merger on liquidity, operating performance and profitability aspects and found that private banks were in better position in their pre-merger period as compared to post-merger performance, whereas the public sector banks have shown significant improvement in performance after the merger. **Devarajappa S, (2012)** explored various motives of merger in Indian banking industry. It also compared pre and post merger financial performance of merged banks with the help of financial parameters like, Gross Profit margin, Net Profit margin, operating Profit margin, Return on Capital Employed, Return on Equity, and Debt Equity Ratio. Finally the study indicates that the banks have been positively affected by the event of merger. **Kaur & Kaur, (2010)** examined the impact of mergers on the cost efficiency of banks that merged during post liberalization period during 1990-91 to 2007-08. To test the efficiency differences between public and private both parametric and non-parametric tests were employed. It was found that over the entire study period average cost efficiency of public sector banks was found to be

73.4 and for private sector banks was 76.3 percent. It was noticed that to some extent merger programmed had been successful in Indian banking sector. It was suggested that Government should not promote merger between strong and distressed banks as a way to promote the interest of the depositors of distressed banks, as it would have adverse effect upon the asset quality of the stronger banks. **Makkar (2013)** analyzed comparative analysis of the financial performance of Indian commercial banks. The study considered a sample of 37 banks (22 public sector banks and 15 private sector banks) for the period from 2006-07 to 2010-11. The study found that the IDBI Bank was the best performing bank followed by Kotak Mahindra Bank and ICICI Bank. Dhanalaxmi Bank had the worst performance followed by J & K Bank and Karnataka Bank Ltd. The results of the t-test disclosed there is no significant difference in the Management, Liquidity Position and Sensitivity to market risk of the two different banks groups. The study concluded that on an average, there is no statistically significant difference in the financial performance of the public and private sector banks in India, but still, there is a need for overall improvement in the public sector banks to make their position strong in the competitive market in India. **Jagjeet Kaur, Dr. Harsh Vineet Kaur (2016)** analyzed the public sector bank‘s performance from 2004 to 2014 by means of the CAMEL model. The results showed that the first position is taken by Bank of Baroda, next by PNB and last position by Central Bank of India. Bank of Baroda and PNB were considered the more steady banks, next by Indian bank and IDBI banks as per CAMEL model. Canara bank & SBI were considered as medium performance. Union Bank, Bank of India, Syndicate Bank & CBI were considered below average performance. **Dr. JeelanBasha.V (2018)** studied the Comparative Performance Analysis of Selected Banks Using Camel Model by examines the performance of 6 banks for the period 2013-17. From the study they have summarized on an average consistency basis of CAMEL model, Canara bank stands the best among sample banks during the study period. **Aspal and Malhotra (2013)** measured the financial performance of Indian public sector banks' asset by camel model and applying the tests like Anova, f test and arithmetic test for the data collected for the year 2007-2011. They concluded that the top

two performing banks are bank of Baroda and Andhra bank because of high capital adequacy and asset quality and the worst performer is united bank of India because of management inefficiency, low capital adequacy and poor assets and earning quality. Central bank of India is at last position followed by UCO bank and bank of Maharashtra. **Purohit and Bothra (2018)** compare the performance of SBI and ICICI Bank using CAMEL parameters. They conclude that ICICI bank needs to improve its position with regard to capital adequacy and asset quality while SBI need to improve its position with regard to management efficiency, earning quality and liquidity. **Meghani (2015)**, a comparative study on financial performance of public sector banks in India: An analysis on CAMEL model. This study is to analyze the financial position and performance of the Bank of Baroda and Punjab National Bank in India based on their financial characteristics. This study attempts to measure the relative performance of Indian banks. For this study have been used public sector banks. The results suggested that adequacy ratio, assets quality, management, earnings, liquidity and bank size are statistically significant in explaining bank failure in public sector banks. **Anand and Singh (2008)** analyses five mergers in the Indian banking sector to capture the returns to shareholders as a result of the merger announcements using the event study methodology. Their study reveals that the merger announcements in the Indian banking industry have positive and significant shareholder wealth effect both for bidder banks and target banks. **Deepak Sahni & Soniya Gambhir (2018)** evaluates the impact of Merger and Acquisition on the financial performance of selected commercial banks in India for this purpose a case of Centurion Bank of Punjab Ltd and HDFC Bank Ltd is selected through judgment as sample case. The study uses Camel approach and T-Test for evaluating the financial performance before and after Merger and Acquisition. From the study it was found that most of the ratios related to Capital adequacy, Earning quality and Asset quality have performed well but most of the ratios related to Management quality (i.e. Business per employee and profit per employee) and liquidity ratios have not performed well. **Kumar S. (2013)** observed that after the execution and implementation of reform

measures, there has been large changes in the ideas, perceptions and working of commercial banks. The author examines the pre-merger and post-merger performance of two banks i.e. Bharat Overseas Bank and Indian overseas Bank by comparing their efficiency parameter like Business per employee, Return on assets, Profit per employee etc. The study concluded that smaller banking firms are less efficient and more risky than larger banking firms. Although individual bank as well as its branch too can be effective, but the combined assets, systems and technology platforms of the corporate parents will reduce the risk and extend the credit, which a single particular bank cannot do.

OBJECTIVES

The present study is proposed to carry out to meet the following objectives:

1. To determine the effect of mergers and acquisitions of State banks of India, HDFC Bank, ICICI Bank and Kotak Mahindra Bank since the year 2008-2018.

2. To evaluate the financial performance of selected commercial banks before and after the merger using CAMEL (Capital Adequacy, Asset Quality, Management Quality, Earning Quality and Liquidity) Model.

METHODOLOGY

Sources of Data:
The study is based on Secondary Sources which includes the Annual Reports of the Select Banks, research publications etc.

Period of Study:
The study will cover a period of ten financial years from 2008 to 2018.

Sample Selection:
Several Mergers have taken place in the Banking Sector in India between various Banks for various reasons. The study has taken up all those commercial Banks who have participated in the Merger activity since the year 2008 to 2018.

Data analysis tools:
Financial ratio analysis tools are used to determine the performance of the banks in the frame work of CAMEL components.
T test Statistical tool are used to test the Hypothesis as to whether there is any significant difference in the performance of the select Banks before and after the Merger.

HYPOTHESIS OF THE STUDY

H_0: There is no significant change in the CAMEL ratios of the merged banks pre and post merger.

H_1: There is significant change in the CAMEL ratios of the merged banks pre and post merger.

LIMITATIONS OF STUDY

The study suffers from certain limitations and some of these are mentioned below so that finding of the study can be understood in a proper perspective. The limitations of the study are as follows:

- The present study is limited to only 4 commercial banks of India. Hence, the results are not applied to the entire banking sector.
- This study is limited to only ten-year time period (2008 to 2018).
- The study is based only on secondary data which has been collected from published annual reports of banks and various relevant internet sources.

DATA ANALYSIS AND INTERPRETATION

Table-2: Banks performance ratios (CAMEL)

	Banks	SBI Bank		Kotak Mahindra Bank		ICICI Bank		HDFC Bank	
	Ratio	Pre	Post	Pre	Post	Pre	Post	Pre	Post
		FY 15-16	FY 17-18	FY 13-14	FY 15-16	FY 09-10	FY 11-12	FY 07-08	FY 09-10
C	CAR	13.12%	12.60%	18.80%	16.34%	19.40%	18.50%	13.60%	17.44%
A	Net NPA	3.81%	5.73%	1.08%	1.06%	2.12%	0.73%	0.47%	0.31%
M	ROA	0.46%	-0.19%	1.80%	1.20%	1.13%	1.50%	1.32%	1.53%
E	PBT (In Billion)	138	-155	31	23	53	88	23	43
L	IDR	31.97%	38.45%	49.37%	38.26%	53.28%	61.16%	47.29%	37.85%

INTERPRETATIONS

1) Table-2 clearly indicates Pre-Merger ratio of the CAR of SBI, Kotak Mahindra Bank and ICICI Bank is 13.12%, 18.80%, 19.40%, respectively and fell down in Post-Merger of SBI, Kotak Mahindra Bank and ICICI Bank is 12.60%, 16.34%, 18.50% respectively. Whereas, HDFC Bank Pre-Merger ratio of CAR is 13.60% and rose to 17.44% in Post-Merger which says that the merger had improved the performance of the HDFC bank in terms of capital adequacy. Both the ratios (Pre & post) are higher than the standard ratio prescribed by Basal II and RBI guideline. Hence, we can say that all 4 banks were able to manage the requirement of minimum CAR. It shows that the banks are adequately capitalized before and after merger.

2) As we can see from the Table-2 Pre-Merger ratio of Net NPAs to Net Advance of SBI is 3.81%, which increases to 5.73% due to an increase in non-performing assets after merger. Whereas, Kotak Mahindra Bank, HDFC Bank and ICICI Bank Pre-Merger ratio of Net NPAs to Net Advance is 1.08%,2.12%,0.47%, respectively which decreases in Post-Merger to 1.06%,0.73%, 0.31% respectively. With reference to asset quality the NPA’s-to-total advances ratio for State Bank of India is highest as compared to other banks, which means that SBI banks is having higher inability in terms of recovering their advances compared to the all the

other banks. So, I conclude that except SBI bank all other bank had improved the performance in terms of assets quality after merger.

3) Table-2 shows Pre-Merger ratio of Return on Assets ratio (ROA) of SBI and Kotak Mahindra Bank is 0.46%, 1.80%, respectively which decreases in Post-Merger to (0.19) %, 1.20% respectively. Whereas, HDFC Bank and ICICI Bank Pre-Merger ratio of Return on Assets is 1.13%,1.32%, respectively, which increases in Post-Merger to 1.50%,1.53%, respectively. In terms of management capability, the HDFC Bank and ICICI Bank had improved the performance of the bank after merger.

4) Table-2 represents Pre-Merger Profit Before Tax (PBT) of SBI and Kotak Mahindra Bank is Rs.137740574, Rs.31237154 respectively which decreases in Post-Merger to Rs. (155282416), Rs.22724535 respectively. Whereas, HDFC Bank and ICICI Bank Pre-Merger ratio of Return on Assets is Rs.53453218, Rs.22806300, respectively which increases in Post-Merger to Rs.103919499, Rs.42891365, respectively. So, I conclude that merger had improved HDFC and ICICI Banks performance in terms of earning efficiency.

5) As we can see from the Table-2 Pre-Merger ratio of Investment deposit ratio (IDR) of SBI and ICICI Bank had increased after merger, i.e. from 31.97%,53.28% to 38.45%, 61.16%, respectively. Whereas, Kotak Mahindra Bank and HDFC Bank indicates decline after merger, i.e. from 49.37%, 47.29% to 38.26%, 37.85%, respectively. So, I conclude that merger had improved SBI and ICICI Banks performance in terms of Liquidity efficiency.

HYPOTHESIS TESTING

For hypothesis testing, pre and post merger financial ratios have been calculated and compared to see if there are any significant statistical changes in financial performance by using paired sample t-test at a

confidence level 0.05 or 95% (2 tailed). The results are shown in the following table for the merged company.

Table 3: Paired Samples T-test of ICICI Bank

		Mean		Mean	STDEV		T-Value	P-Value
		Pre	Post	Difference	Pre	Post		
C	CAR	0.148	0.285	-0.137	0.029	0.242	-1.235	0.285
A	Net NPA	0.015	0.014	0.001	0.006	0.009	0.341	0.750
M	ROA	0.011	0.017	-0.005	0.001	0.002	-4.557	0.010
E	PBT	43.430	131.121	-87.691	9.575	28.802	-8.197	0.001
L	IDR	0.459	0.548	-0.089	0.047	0.069	-1.801	0.146

Based on the results of t-test (95% significance level) we got in Table 4, indicates that the post-merger Return on Assets (ROA) and Profit before Tax (PBT) of ICICI Bank with a level of significance of P = 0.010, 0.001, respectively, which is less than the p-value 0.05, Null Hypothesis has been rejected. Whereas, Capital Adequacy ratio, net NPA and Investment Deposit Ratio P value is 0.285, 0.750 and 0.146, respectively which is greater than 0.05 level of significance, Therefore, Null Hypothesis is accepted. So, it can be concluded only Return on Assets (ROA) and Profit before Tax (PBT) is affected by merger and other parameters did not bring any significant changes in the financial position after merger.

Table 4: Paired Samples T-test of HDFC Bank

		Mean		Mean	STDEV		T-Value	P-Value
		Pre	Post	Difference	Pre	Post		
C	CAR	0.124	0.166	-0.042	0.009	0.005	-7.335	0.002
A	Net NPA	0.003	0.002	0.001	0.001	0.001	1.550	0.196
M	ROA	0.014	0.018	-0.004	0.001	0.002	-3.049	0.038
E	PBT	13.742	80.287	-66.546	6.107	33.391	-5.451	0.006
L	IDR	0.533	0.366	0.167	0.064	0.018	5.553	0.005

Based on the results of t-test (95% significance level) we got in Table 4, indicates that the post-merger Capital Adequacy ratio, Return on Assets

(ROA), Profit before Tax (PBT) and Investment Deposit Ratio (IDR) of HDFC Bank with a level of significance of P = 0.002, 0.038, 0.006, 0.005, respectively, which is less than the p-value 0.05, Null Hypothesis has been rejected. Whereas, Net NPA P value is 0.196 which is greater than the 0.05 level of significance, Therefore, Null Hypothesis is accepted. So, it can be concluded only Net NPA is not affected by merger and other parameters did bring significant changes in the financial position after merger.

CONCLUSION

During the process of evaluation of performance of Banks our study concluded that the Private sector bank has performed well as compared to public sector bank which is SBI.

After merger only ICICI bank and HDFC bank gain inorganic growth, whereas the State Bank of India (SBI) and Kotak Mahindra Bank lost on it, but the Kotak Mahindra Bank still seems to be seen better than SBI.

Overall, it can be concluded that after the Merger and Acquisition ICICI Bank performance is best, followed by HDFC Bank, SBI and Kotak Mahindra Bank is not doing that great, but the Kotak Mahindra Bank is at least in positive PBT against ABI which is negative PBT.

REFERENCES

- Anderibom, Samuila, & Obute (2015), "The Effect of Mergers and Acquisitions on the Performance of Commercial Banks in Nigeria: Evidenced from United Bank for Africa (UBA) plc". International Journal of Education and Research,3(4).
- Brahma Chaudhuri (2018), "A Comparative Analysis of SBI and ICICI: Camel Approach". *International Journal of Research in Management, Economics and Commerce (IJRMEC)*, Volume-8, Issue-1, Pp 151-156.

- Dr. (Mrs.) Prashanta Athma, A. Bhavani (2017), “Trends in Mergers in Banking Sector in India: An Analysis” International Journal of Research In Commerce, Economics & Management, Vol.6, No.4.
- Kalaichelvan, K. (2011). “Efficacy of merger and acquisition in Indian banking industry: a study with reference to select merged banks in India” (Ph D Thesis). Pondicherry University, Puducherry.
- Devarajappa S, IRJC (2012), “Mergers in Indian Banks: A Study on Mergers of HDFC Bank Ltd and Centurion Bank of Punjab Ltd”, International Journal of Marketing, Financial Services & Management Research Vol. 1 Issue 9, September 2012.
- Kaur P, Kaur G. “Impact of Mergers on the Cost Efficiency of Indian Commercial Banks”. Eurasian Journal of business and economics. 2010; 3(5):27-50.
- Anita Makkar (2013) “Analysis of the financial performance of Indian Commercial Banks: A comparative study of ROA performance of public sector banks in India”. IUP Journal of Bank Management, Vol. XI issue 3, pp.22-35.
- Jaspreet Kaur, Manpreet Kaur and Dr.Simranjit Singh (2015), —”Financial performance analysis of selected public sector banks: A CAMEL model approach”, I J A B E R, Vol. 13, No. 6, 4327-4348.
- Dr. Jeelanbasha.V "Comparative Performance Analysis of Selected Banks Using Camel Model" IOSR Journal of Business and Management (IOSR-JBM) 20.6 (2018): 87-93.
- Malhotra, P. K. (2013), “Performance Appraisal of Indian Public Sector Banks”, World Journal of Social Sciences, Vol. 3. No. 3.
- Purohit, A. and Bothra, P. 2018. “A Camel Model Analysis of Selected Public and Private Sector Banks in India”. Proceedings of ASAR International Conference, 07th January, 2018, Goa, India.
- Kishore, Meghani., (2015). “A comparative study on financial performance of public sector banks in India: An analysis on CAMEL model”. Jawaharlal Nehru Technological University, Hyderabad, MPRA Paper No. 62844.
- Kumar, S. (2013). “Impact of Bank Mergers on the Efficiency of Banks: A study of merger of Bharat Overseas Bank with Indian

Overseas Bank". International Journal of Academic Research in Business and Social Sciences, 3(12), 221.

- D. Sahni & S. Gambhir (2018), "Financial Performance Evaluation of Indian Commercial Banks After Merger and Acquisition" (A study with reference to selected Merged Banks in India), Gurukul Business Review (GBR) Vol. 14 (Spring 2018), pp. 26-36.
- Anand, M., & Singh, J., (2008). "Impact of Merger Announcements on Shareholders Wealth: Evidence from Indian Private Sector Banks". Journal for Decision Makers, 33(1): 35-54.
- Annual Reports of HDFC. https://www.hdfcbank.com/personal/about-us/investor-relations/annual-reports
- Annual Reports of SBI - https://sbi.co.in/web/corporate-governance/annual-report
- Annual Reports of ICICI.- https://www.icicibank.com/aboutus/annual.page
- Annual Reports of Kotak Mahindra Bank.- https://www.kotak.com/en/investor-relations/financial-results/annual-reports.html