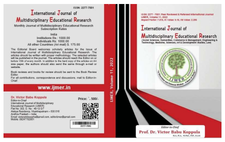


Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881; IMPACT FACTOR :8.017(2022); IC VALUE:5.16; ISI VALUE:2.286
Peer Reviewed and Refereed Journal: VOLUME:11, ISSUE:11(1), November: 2022
Online Copy of Article Publication Available (2022 Issues)
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: 2nd November 2022
Publication Date:10th December 2022
Publisher: Sucharitha Publication, India
Digital Certificate of Publication: www.ijmer.in/pdf/e-CertificateofPublication-IJMER.pdf

DOI: http://ijmer.in.doi./2022/11.11.06
www.ijmer.in

FINANCIAL RATIOS OF ICICI BANK LTD. DURING THE PRE & POST MERGER

[1]Dr. Sunil Kumar and [2]Dr. Sadhana Prajapati
[1]Assistant Professor-Commerce and [2]Vidya Devi Shree BD Somani
[1]Government Girls Degree College and [2]Arya Mahila Uchch Shikshan Sansthaan
[1]Saiyadraja Chandauli and [2]Chetaganj, 2Varanasi
Uttar Pradesh, India

INTRODUCTION

In this paper, we have try to calculate the banks financial data for analyzing ratios with statistical tools and methods to test and evaluate the research prediction, research methodology of the comparing merge banks on the basis of pre and post performances after Merger and Acquisitions(M&As). It has been adopted, by using following financial parameters which are as follows- Gross profit margin, Net profit margin, Operating profit margin, return on capital employed, return on equity, and Debt equity ratio etc. we have chosen banks for Merger and Acquisitions (M&As) randomly as sample, from

ICICI Bank Ltd. which merged to Bank of Rajasthan private sector bank in order to evaluate the impact of M&As. The pre-merger (3years prior) and post-merger (5 years) of the financial ratios are being compared in calculation ways. The analysis observation of each case in the sample is considered as an independent variable. Before merger two different banks carried out operating business activities and after the merger the bidder bank carrying business of both the banks data. Evaluation of data variable view and data view for the purpose & objectives of the study independent t-test and standard deviation is being employed under this research part. Selecting the year of merger was considered as a base year and denoted as 0 and it is excluded from the evaluation. Banks pre (3 years before) merger the combined ratios of both banks are equally considered and for the post-merger (after 5 years) the ratios of acquiring bank were used.

The student's t-distribution is-

$$t = \frac{\bar{x}_1 - \bar{x}_2}{s} \sqrt{\frac{n_1 n_2}{n_1 + n_2}}$$

$$\bar{x}_2 = \frac{\sum x_2}{n2} \quad \bar{x}_1 = \frac{\sum x_1}{n1}$$

Where $\bar{x}_1$ is the mean of combined pre-merger ratio of both banks $\bar{x}_2$ is the mean of acquiring bank post-merger n_1 and n_2 are the number of observations of 1st and 2nd series respectively. S is the combined standard deviation.

$$s = \sqrt{\frac{\sum(x_1-A_1)^2+\sum(x_2-A_2)^2-n_1(\bar{x}_1-A_1)^2-n_2(\bar{x}_2-A_2)^2}{n_1+n_2-2}}$$

$$(n_1 + n_2 - 2)\text{Degree of freedom}$$

Where A^1 and A^2 are the assumed means of 1st and 2nd series

RATIOS FORMULAS

Gross Profit Margin = Gross Profit/Sales × 100
Net Profit Margin = Net Profit/Sales × 100
Operating Profit Margin = Operating Profit/Sales × 100
Return on Capital Employed (ROCE) =Net Profit/Total Assets × 100
Return on Equity (ROE) =Net Profit/Equity Share Holder's Funds × 100
Debt Equity Ratio (Pure Ratio) = Total Debt/ Share Holder Equity

Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881; IMPACT FACTOR :8.017(2022); IC VALUE:5.16; ISI VALUE:2.286
Peer Reviewed and Refereed Journal: VOLUME:11, ISSUE:11(1), November: 2022
Online Copy of Article Publication Available (2022 Issues)
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: 2nd November 2022
Publication Date:10th December 2022
Publisher: Sucharitha Publication, India
Digital Certificate of Publication: www.ijmer.in/pdf/e-CertificateofPublication-IJMER.pdf

DOI: http://ijmer.in.doi./2022/11.11.06
www.ijmer.in

HYPOTHESES

I have testing the various hypotheses under as given bellow-

(1) Testing the significance difference between Pre and Post merger Operating Profit Ratio -
- H0 (Null Hypothesis) There is no significance difference between the pre and post-merger Operating Profit Ratio.
- H1 (Alternative Hypothesis) There is significance difference between the pre and post-merger Operating Profit Ratio.

(2) Testing the significance difference between Pre and Post merger Net Profit Margin-
- H0 (Null Hypothesis) There is no significance difference between the pre and post-merger Net Profit Margin.
- H1 (Alternative Hypothesis) There is significance difference between the pre and post-merger Net Profit Margin.

(3) Testing the significance difference between Pre and Post merger Return on Investment -
- H0 (Null Hypothesis) There is no significance difference between the pre and post-merger Return on Investment.
- H1 (Alternative Hypothesis) There is significance difference between the pre and post-merger Return on Investment.

(4) Testing the significance difference between Pre and Post merger Earning per Share-
- H0 (Null Hypothesis) There is no significance difference between the pre and post-merger Earning per Share.
- H1 (Alternative Hypothesis) There is significance difference between the pre and post-merger Earning per Share.

(5) Testing the significance difference between Pre and Post merger Dividend Payout Ratio
- H0 (Null Hypothesis) There is no significance difference between the pre and post-merger Dividend Payout Ratio.
- H1 (Alternative Hypothesis) There is significance difference between the pre and post-merger Dividend Payout Ratio.

(6) Testing the significance difference between Pre and Post merger Debt-Equity Ratio
- H0 (Null hypothesis) There is no significance difference between the pre and post-merger Debt-Equity Ratio.
- H1 (Alternative hypothesis) There is significance difference between the pre and post-merger Debt-Equity Ratio.

PRE AND POST BANK MERGER INTERPRETATIONS

I have been selected banks for study, as ICICI Bank Ltd. which merged to Bank of Rajasthan dated on August 13, 2010, analyze the financial performance of banks after Merger and Acquisitions (M&As). The financial analysis and accounting ratio like Gross profit margin, Net profit margin, Operating profit margin, return on capital employed, return on equity, and Debt equity ratio have been calculated.

Related Table, shows the combined performance of both banks prior to merger. Similarly, in the third case, depicts the Bank of Rajasthan (Target Bank) and ICICI Bank Ltd. (Bidder Bank) for the last three financial years is ending before the merger announcement. Financial Ratio of ICICI BANK Ltd. 2016-2020, indicates the performance of ICICI Bank Ltd. (Bidder Bank) for the next five financial years was ending after the merger announcement.

In this selected bank for case study financial and accounting ratios have computed by me through banks and financial data providing resources.

Table -1: Profile of Bank of Rajasthan (Target Bank) and ICICI Bank Ltd. (Bidder Bank) for the last three financial years is ending before the merger announcement

Financial Ratios (in Percentage)

Financial Ratios	Bank of Rajasthan (Target Bank)			ICICI Bank Ltd. (Bidder Bank)		
	31 March 2007	31 March 2008	31 March 2009	31 March 2007	31 March 2008	31 March 2009
Operating Profit Ratio	28.84	21.18	21.12	28.87	26	26.22
Net Profit Ratio	12.56	9.75	7.81	10.81	10.51	9.74
Return on Investment	140.81	173	185.2	82.46	62.34	56.72
Earning per Share	10.28	8.57	7.3	34.59	37.37	33.76
Dividend Payout Ratio	19.45	5.83	2.74	28.91	29.43	32.58
Debt-Equity Ratio	25.37	26.15	23.6	9.5	5.27	4.42

Source: financial statement of Banks retrieved from Researcher's compilation

Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881; IMPACT FACTOR :8.017(2022); IC VALUE:5.16; ISI VALUE:2.286
Peer Reviewed and Refereed Journal: VOLUME:11, ISSUE:11(1), November: 2022
Online Copy of Article Publication Available (2022 Issues)
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: 2nd November 2022
Publication Date:10th December 2022
Publisher: Sucharitha Publication, India
Digital Certificate of Publication: www.ijmer.in/pdf/e-CertificateofPublication-IJMER.pdf

DOI: http://ijmer.in.doi./2022/11.11.06
www.ijmer.in

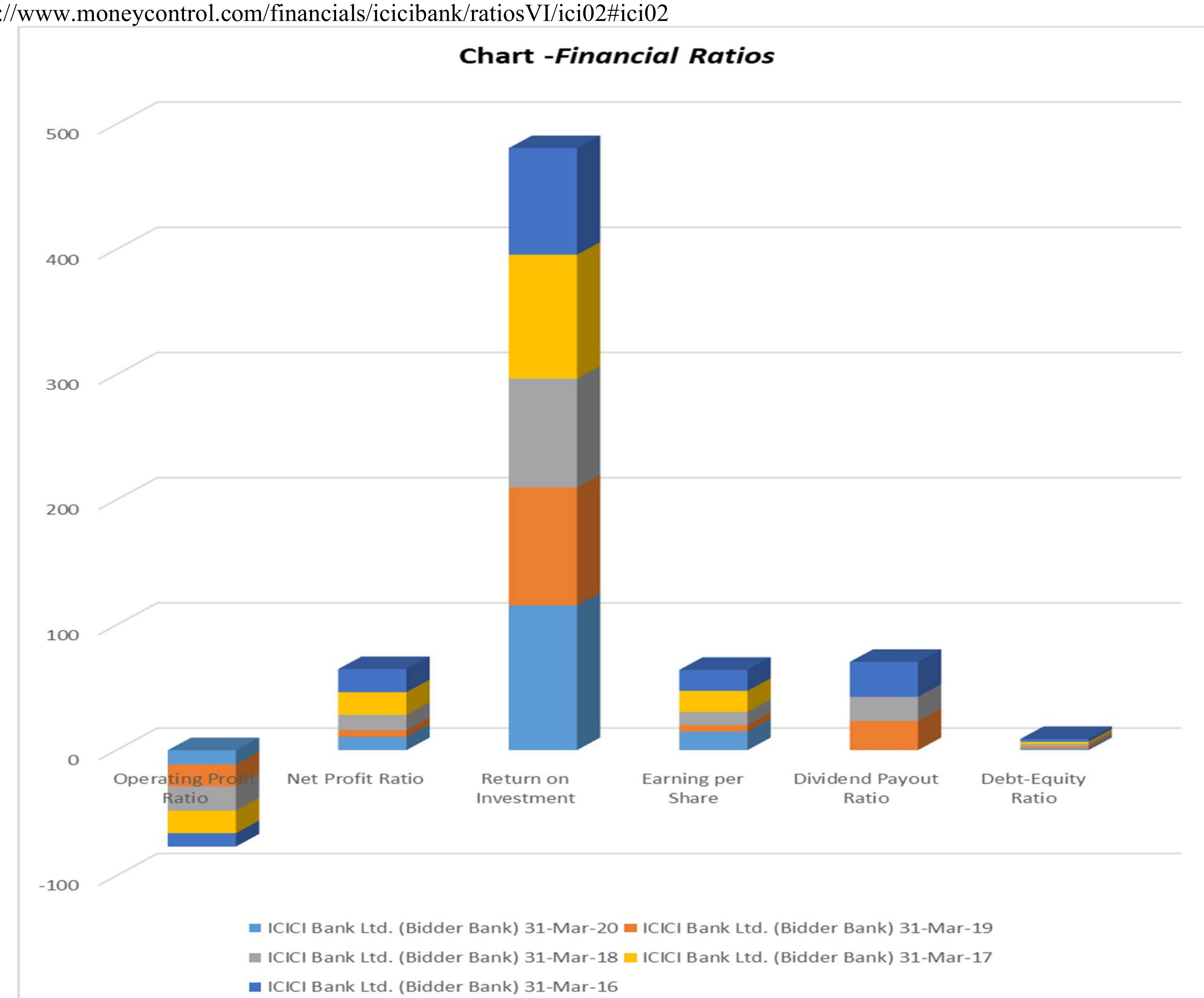
Table - 2: Profile of ICICI Bank Ltd. (Bidder Bank) for the next five financial years was ending after the merger announcement

Financial Ratios (in Percentage)

Financial Ratios	**ICICI Bank Ltd. (Bidder Bank)**				
	31 March 2020	31 March 2019	31 March 2018	31 March 2017	31 March 2016
Operating Profit Ratio	-11.38	-17.58	-19.36	-17.91	-10.61
Net Profit Ratio	10.60	5.3	12.33	18.09	18.44
Return on Investment	115.56	94.14	87.02	99.01	85.12
Earning per Share	14.78	5.22	10.54	16.83	16.73
Dividend Payout Ratio	0.00	23.31	19.28	0.00	27.89
Debt-Equity Ratio	1.23	1.74	1.97	1.72	2.26

Source: Researcher's compilation from financial statement of Banks retrieved

https://www.moneycontrol.com/financials/icicibank/ratiosVI/ici02#ici02



Graph: Financial Ratio of ICICI BANK Ltd. 2016-2020

Cover Page
INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881; IMPACT FACTOR :8.017(2022); IC VALUE:5.16; ISI VALUE:2.286
Peer Reviewed and Refereed Journal: VOLUME:11, ISSUE:11(1), November: 2022
Online Copy of Article Publication Available (2022 Issues)
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: 2nd November 2022
Publication Date:10th December 2022
Publisher: Sucharitha Publication, India
Digital Certificate of Publication: www.ijmer.in/pdf/e-CertificateofPublication-IJMER.pdf
DOI: http://ijmer.in.doi./2022/11.11.06
www.ijmer.in

Table-3: Mean and Standard Deviation of Pre-merger and Post-merger Ratios of combined (Bank of Rajasthan & ICICI Bank Ltd.) and Acquiring Bank ICICI Bank Ltd.

		Mean	Std. Deviation	t-value	Sig.
Operating Profit Ratio	Pre	27.0300	1.59728	-8.470	.001
	Post	-15.3680	4.05689		
Net Profit Ratio	Pre	10.3533	0.55194	5.266	.006
	Post	12.9520	5.49975		
Return on Investment	Pre	67.1733	13.53358	17.647	.000
	Post	96.1700	12.18589		
Earning per Share	Pre	35.2400	1.89074	5.787	.004
	Post	12.8200	4.95399		
Dividend Payout Ratio	Pre	30.3067	1.98586	2.384	.076
	Post	14.0960	13.22347		
Debt-Equity Ratio	Pre	6.3967	2.72096	10.530	.000
	Post	1.7840	.37885		

Source: Researcher's compilation based on SPSS

Table-4

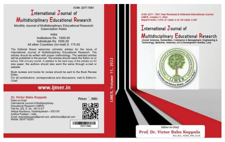
Statistics Pre Merger							
		Operating Profit Ratio	**Net Profit Ratio**	**Return on Invt.**	**EPS**	**Divd. Payout Ratio**	**Debt-Eqt. Ratio**
N	**Valid**	3	3	3	3	3	3
	Missing	0	0	0	0	0	0
Mean		27.0300	10.3533	67.1733	35.2400	30.3067	6.3967
Std. Dev.		1.59728	0.55194	13.5335	1.89074	1.98586	2.7209

Source: Researcher's compilation based on SPSS

Table-5

Statistics Post Merger							
		Ope. Profit Ratio	**Net Profit Ratio**	**Return on Invest.**	**Earning per Share**	**Dividend Payout Ratio**	**Debt-Equity Ratio**
N	**Valid**	5	5	5	5	5	5
	Missing	0	0	0	0	0	0
Mean		-15.37	12.952	96.17	12.82	14.096	1.784
Std. Deviation		4.0569	5.4998	12.186	4.954	13.223	0.3789

Source: I have computed based on SPSS


Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881; IMPACT FACTOR :8.017(2022); IC VALUE:5.16; ISI VALUE:2.286
Peer Reviewed and Refereed Journal: VOLUME:11, ISSUE:11(1), November: 2022
Online Copy of Article Publication Available (2022 Issues)
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: 2nd November 2022
Publication Date:10th December 2022
Publisher: Sucharitha Publication, India
Digital Certificate of Publication: www.ijmer.in/pdf/e-CertificateofPublication-IJMER.pdf

DOI: http://ijmer.in.doi./2022/11.11.06
www.ijmer.in

Table- 6: One-Sample Test

	Test Value = 0					
	t	df	Sig. (2-tailed)	Mean Difference	95% Confidence Interval of the Difference	
					Lower	Upper
OPR	-8.470	4	.001	-15.36800	-20.4053	-10.3307
NPR	5.266	4	.006	12.95200	6.1232	19.7808
ROI	17.647	4	.000	96.17000	81.0392	111.3008
EPS	5.787	4	.004	12.82000	6.6688	18.9712
DPR	2.384	4	.076	14.09600	-2.3231	30.5151
DER	10.530	4	.000	1.78400	1.3136	2.2544

Source: I have computed based on SPSS

In this case, Mean and Standard Deviation of Pre-merger and Post-merger Ratios of combined (Bank of Rajasthan & ICICI Bank Ltd.) and Acquiring Bank ICICI Bank Ltd. has been compared on the basis of key ratios.

It Mean and Standard Deviation of Pre-merger and Post-merger Ratios of combined Banks Bank of Rajasthan & ICICI Bank Ltd.) Acquiring Bank ICICI Bank Ltd. is found that there is shown little decline difference in the mean of Operating Profit Ratio (27.03 percent Vs -15.3680 percent) and t-value -8.47. It is seen that the mean value of Operating Profit Ratio has been decline so it is considered that it does not affect by merger, so it is not shows significant.

The net profit margin statistically confirmed highly significance with mean value (10.3533 percent Vs 12.952 percent) and t-value 5.266. The mean of net profit margin increased after the merger so the performance of the bank has improved in post-merger that means its shows significant

Similarly, the mean value of Return on Investment shows significant increase in the mean (67.1733 percent Vs 96.1700 percent) and t-value 17.647 which indicates that it has been effect after merger and statically it is improvement significant.

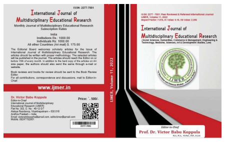
Result also shows the mean difference on Earning per Share (35.24 percent Vs 12.8200 percent) and t-value 5.787 which is conformed not significant statically, this shows the Earning per Share has been decrease after the merger and bank has shown negative impact of merger on investment.

The mean value of Dividend Payout Ratio of bank has been decline after merger and indicated that bank give less Dividend Payout Ratio after merger to the Dividend Payout Ratio and the mean value of Dividend Payout Ratio (30.3067 % Vs 14.0960 %) and t-value 2.384 and shows not significance.

While lastly debt equity ratio shows significance with mean value (6.3967 percent Vs 1.7840 percent) and t-value 10.530. Therefore, this indicates that the debt equity ratio is not in good position after merger so it directly decreased the performance of the banks. So, it's not significance.

Table -7 Case- Bank of Rajasthan merged with ICICI Bank Ltd.

Ratio Analysis	**Hypothesis Selection**	**Result with Explanations**
Operating Profit Ratio	**H0** (Null Hypothesis) **is accepted**	Mean and Standard Deviation of Pre-merger and Post-merger Ratios of combined Banks Bank of Rajasthan & ICICI Bank Ltd.) and Acquiring Bank ICICI Bank Ltd. is found that there is shown decline difference in the mean of Operating Profit Ratio (27.03 percent Vs -15.3680 percent) and t-value -8.470. It is seen that the mean value of Operating Profit Ratio has been decline so it is considered that it does not effect by merger, so it is not shows significant.


Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881; IMPACT FACTOR :8.017(2022); IC VALUE:5.16; ISI VALUE:2.286
Peer Reviewed and Refereed Journal: VOLUME:11, ISSUE:11(1), November: 2022
Online Copy of Article Publication Available (2022 Issues)
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: 2nd November 2022
Publication Date:10th December 2022
Publisher: Sucharitha Publication, India
Digital Certificate of Publication: www.ijmer.in/pdf/e-CertificateofPublication-IJMER.pdf

DOI: http://ijmer.in.doi./2022/11.11.06
www.ijmer.in

Net Profit Margin.	**H1** (Alternative Hypothesis) **is accepted**	The net profit margin statistically confirmed highly significance with mean value (10.3533 percent Vs 12.9520 percent) and t-value 5.266. The mean of net profit margin increased after the merger so the performance of the bank has improved in post-merger that means its shows significant.
Return on Investment	**H1** (Alternative Hypothesis) **is accepted**	The mean value of Return on Investment shows significant increase in the mean (67.1733 percent Vs 96.1700 percent) and t-value 17.647 which indicates that it has been effect after merger and statically it is improvement significant.
Earning per Share	**H0** (Null Hypothesis) **is accepted**	The mean difference on Earning per Share (35.24 percent Vs 12.8200 percent) and t-value 5.787 which is conformed not significant statically, this shows the Earning per Share has been decrease after the merger and bank has shown negative impact of merger on investment.
Dividend Payout Ratio	**H0** (Null Hypothesis) **is accepted**	The mean value of Dividend Payout Ratio of bank has been decline after merger and indicated that bank give less Dividend Payout Ratio after merger to the Dividend Payout Ratio and the mean value of Dividend Payout Ratio (30.3067 % Vs 14.0960 %) and t-value 2.384 and shows not significance.
Debt Equity Ratio.	**H1** (Alternative Hypothesis) **is accepted**	Debt equity ratio shows significance with mean value (6.3967 percent Vs 1.7840 percent) and t-value 10.530. Therefore this indicates that the debt equity ratio also in good position after merger so it directly increased the performance of the banks. So it's significance.

Calculation: Hypothesis testing of Bank of Rajasthan & ICICI Bank Ltd

Discussions

After the bank merger analysis, I have got that in various financial parameter of the bank performance have improved in both cases and some parameters have shown no change, some negative and some positive in the mean and standard deviation but it may be possible that improved performance of merged Bank would be shown in later years the profit are not visible in progressive in few years got positive in net profit ration, gross profit ratios. I have compared after merger five years financial ratios and three years pre-merger financial ratios; it has proven that profit will be not seen in future in current merger and acquisitions so need to merged large size of bank including three or four bank then will find positive. There are some financial parameters which goes on down worth to bank merger aim and objectives. It is not necessary to achieved all objectives and policy but after merger, the size of the bank would be increasable but lack of guarantee to increase net profitability after merger.

The success of merger is dependent upon synergy gains and government policy and created after the merger and overall performance of bank, the financial performance of the selected banks has been not proven in recent years i.e. 31 March 2016 to 31 March 2020, selected banks in last five years performance wise the reaction comes out in terms of Operating Profit Ratio, Net Profit Margin, Return on Investment, Earning per Share, Dividend Payout Ratio and Debt Equity Ratio. But in the certain cases of the financial ratios were not positively affected by merger and show no relation between pre and post-merger performance and may require due time for showing profitability in constantly growing basis.

Impact of Covid-19 on the performance of the Bank

The Indian economy would be impacted by Covid-19 pandemic with contraction in industrial and services output across small and large businesses. The Bank's business is expected to be impacted by lower lending opportunities and revenues in the short to medium term. The impact of the Covid-19 pandemic on Bank's results, including credit quality and provisions, remains uncertain and dependent on the spread of Covid-19, further steps taken by the government and the central bank to mitigate the economic impact, steps taken by the Bank and the time it takes for economic activities to resume at normal levels. The Bank's capital and liquidity position is strong and would continue to be the focus area for the Bank during this period.

Cover Page

INTERNATIONAL JOURNAL OF MULTIDISCIPLINARY EDUCATIONAL RESEARCH
ISSN:2277-7881; IMPACT FACTOR :8.017(2022); IC VALUE:5.16; ISI VALUE:2.286
Peer Reviewed and Refereed Journal: VOLUME:11, ISSUE:11(1), November: 2022
Online Copy of Article Publication Available (2022 Issues)
Scopus Review ID: A2B96D3ACF3FEA2A
Article Received: 2nd November 2022
Publication Date:10th December 2022
Publisher: Sucharitha Publication, India
Digital Certificate of Publication: www.ijmer.in/pdf/e-CertificateofPublication-IJMER.pdf

DOI: http://ijmer.in.doi./2022/11.11.06
www.ijmer.in

References

1. https://money.rediff.com/money/jsp/ratio.jsp?companyCode=14030016
2. http://www.moneycontrol.com/stocksmarketsindia/
3. https://www.ndtv.com/business/stock/punjab-national-bank_pnb/financials-historical-ratio
4. http://www.moneycontrol.com/stocksmarketsindia/
5. http://www.moneycontrol.com/stocksmarketsindia/
6. https://www.moneycontrol.com/financials/hdfcbank/ratios/hdf01
7. https://www.ndtv.com/business/stock/hdfc-bank-ltd_hdfcbank/financials-ratio
8. https://www.ndtv.com/business/stock/hdfc-bank-ltd_hdfcbank/financials-ratio
9. https://www.goodreturns.in/company/icici-bank/ratios.html,
10. https://money.rediff.com/companies/ICICI-Bank-Ltd/14030056/ratio
11. https://www.ndtv.com/business/stock/state-bank-of-india_sbin/financials-historical-ratio
12. https://www.ndtv.com/business/stock/state-bank-of-india_sbin/financials-historical-ratio
13. http://www.iaeme.com/MasterAdmin/Journal_uploads/IJMET/VOLUME_9_ISSUE_5/IJMET_09_05_028.pdf
14. https://www.ndtv.com/business/stock/kotak-mahindra-bank-ltd_kotakbank/financials-historical-ratio,
15. https://www.moneycontrol.com/financials/kotakmahindrabank/consolidated ratios/KMB#KMB,https://money.rediff.com/companies/Kotak-Mahindra-Bank-Ltd/14060005/ratio