An Analysis of the Effect of Merger of Western Union Bank with Industrial Development Bank of India during Post Liberalized Regime

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Abstract

The article critically analyzes and evaluates the impact of merger of Western Union Bank with IDBI during Post Liberalization Regime in terms of different parameters with special reference to merger and acquisition. The study has further attempted to investigate and test whether there exist any significant deviations in the results achieved by the banks after merger. For conducting the study, Shapiro-Wilk normality test and Wilcoxon Paired Sign-Rank test was conducted for factors not following normal distribution. Thereafter, we compared means of the performance parameter over time i.e. before the merger vs after the merger. T-test and Wilcoxon test were chosen because those are popularly used for computing pre-post analysis of a phenomenon. The different parameters chosen for study were ROA, CDR, IDR, PSA, DPE, APE, IITI, NIITI, IETE, EETE, OOETE, STA, IIAWF, NIIAWF, OPAWF, NNPANA, CAR. Paired Samples t Test suggests that there is significant difference in case of only a few pre and post merger financial parameters and most of the financial parameters undertaken in our study do not have any significant pre and post difference in operating performance level.

1. Introduction

The theme of impact of mergers on the efficiency of banks has been well studied in the finance literature. In the early 1990s, the Indian banking sector has observed the fundamental changes in banks and other financial institutions. Enhancing the efficiency and productivity of the banks are one of the reasons for banking sector reforms. The substantial merger wield that affected the banking industries of many countries has stimulated large literature on the effects of mergers on the efficiency and bank performance. The mergers and acquisition in the banking industry facilitates to harvest the benefit of economies of scales and product diversification with reduced business risk as well. In particular, some studies hold the outlook that consolidation via merger is advantageous because more efficient bank mergers substitute less efficient ones .Greater bank size can yield economies of scale and scope, increase diversification, opportunities and greater cost savings (Berger et al., 1999). The available empirical evidence on the effects of bank mergers is mixed. Most of the literature judging the impact of mergers on the efficiency of banks is found in developed countries like EUROPE and USA. In India, literature on bank merger is very insufficient. Very few studies have been conducted with the motive to examine the impact of mergers on the performance of Indian Commercial banks. The present study makes remarkable contribution to the existing literature on impact of merger on banking sector in India.

The objective of the study is to critically analyze and evaluate the impact of merger of Western Union Bank with IDBI during Post Liberalization Regime in terms of different parameters with special reference to merger and acquisition. The study has further attempted to investigate and test whether there exist any significant deviations in the results achieved by the banks after merger.

2. Methodology

The secondary data which has been collected was subjected to descriptive and inferential analysis. This study has attempted to test the hypotheses relating to the impact of M&A on the various performance parameters and thus derive a conclusion about whether the event of M&A has made a positive impact on the performance of these banks- IDBI and Western Union Bank. The software SPSS 20.0, E.Views and MS Excel were used to compute and analyze the data. The ratios for each of the performance parameters were estimated for the above mentioned merger individually. This was followed by the Shapiro-Wilk normality test. On the basis of the normality results, paired t test at 95% confidence level was carried out for parameters following normal distribution and Wilcoxon Paired Sign-Rank test was conducted for factors not following normal distribution. We have also conducted Kolmogorov-Smirnov test to justify whether there is violation in normality assumption**.** Thereafter, we compared means of the performance parameter over time i.e. before the merger vs after the merger. T-test and Wilcoxon test were chosen because those are popularly used for computing pre-post analysis of a phenomenon. The Shapiro–Wilk test is also conducted to test of normality. The different parameters chosen for study were ROA, CDR, IDR, PSA, DPE, APE, IITI, NIITI, IETE, EETE, OOETE, STA, IIAWF, NIIAWF, OPAWF, NNPANA, CAR.

2.1. Kolmogorov-Smirnov test

This test assesses whether there is significant departure from normality in the population distribution for each of the banks. The null hypothesis states that the normality assumption is not violated.

2.2. Shapiro–Wilk test

The Shapiro–Wilk test is a test of normality in frequentist statistics. The null-hypothesis of this test is that the population is normally distributed.

Shapiro Wilks W Test

$$W = \frac{(\sum_{i=1}^{n} a_i x_i)^2}{\sum_{i=1}^{n} (x_i - \overline{x})^2}$$

W is the test statistic

W is insignificant if the variable's distribution is not different from normal
- W ≈ the correlation between given data and ideal normal scores
- W = 1 when your sample‐variable data are perfectly normal (perfect H0)
- When W is significantly smaller than 1 = non‐normal (Ha is accepted)
- Shapiro‐Wilk's W is recommended for small and medium samples up to n = 2000

2.3. Paired Sample T Test

It checks whether there is any significant change in normal return before and after the announcement of the M&A event. The hypotheses for the test is stated below (Bhaumik and Selarka, 2008).

H_O: There is no significant difference in normal return due to the occurrence of the event.

H_1: There is a significant difference in normal return due to the occurrence of the event .

The hypotheses can be expressed in two different ways that express the same above idea and are mathematically equivalent:

$H_0: \mu_1 = \mu_2$ ("the paired population means are equal")

$H_1: \mu_1 \neq \mu_2$ ("the paired population means are not equal") or

$H_0: \mu_1 - \mu_2 = 0$ ("the difference between the paired population means is equal to 0")

$H_1: \mu_1 - \mu_2 \neq 0$ ("the difference between the paired population means is not 0")

Where μ_1 is the population mean of variable 1, and μ_2 is the population mean of variable 2.

2.4. Wilcoxon Signed-Ranks Test:

The Wilcoxon Signed-Rank test is a non-parametric statistical hypothesis test used when comparing two related samples, matched samples, or repeated measurements on a single sample to assess whether their population mean ranks differ (i.e. it is a paired difference test). It can be used as an alternative to the paired Student's t-test, t-test for matched pairs, or the t-test for dependent samples when the population cannot be assumed to be distributed. As the Wilcoxon signed rank test does not assume normality in the data, it can be used when this assumption has been violated and the use of dependent t- test is inappropriate. Therefore, it is the non-parametric version of a paired samples t-test. It is used when the difference between the two variables is abnormally distributed. It analyses the difference between the paired observations, taking into account the magnitude of the differences.

The assumption lying behind Wilcoxon Signed-Ranks Test is that data is paired and comes from the same population, each pair is chosen randomly and independently and The data are measurd at least on an ordinal scale(i.e., they cannot be nominal).

3. Analysis of results:

The result of the normality test of merged entity of IDBI shows that the significant value of CDR, IDR, DPE OOETE, CAR of the IDBI during entire sample period 2000-01 to 2014-15(both pre-merger and post-merger) is less than 0.05, meaning that normality assumption has been violated. Since the significant values of each of the remaining variables (in table-1) is greater than 0.05, we do not reject the null hypothesis and conclude that these data do not violate the normality assumption.   The same result is also confirmed by the Shapiro-Wilk test.

Table1: Kolmogorov-Smirnov test and Shapiro-Wilk test of normality of merged entity of IDBI

	Tests of Normality					
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	df	Sig.
CDR	.311	11	.004	.678	11	.000
IDR	.370	11	.000	.603	11	.000
PSA	.125	11	.200*	.958	11	.740
DPE	.254	11	.046	.875	11	.039
APE	.204	11	.200*	.918	11	.300
IITI	.163	11	.200*	.912	11	.255
NIITI	.163	11	.200*	.912	11	.255
IETE	.186	11	.200*	.900	11	.184
EETE	.138	11	.200*	.966	11	.838
OOETE	.322	11	.002	.722	11	.001
STA	.245	11	.063	.873	11	.085
IIAWF	.170	11	.200*	.860	11	.058
NIIAWF	.167	11	.200*	.954	11	.701
OPAWF	.155	11	.200*	.930	11	.412
ROA	.212	11	.178	.934	11	.447
NNPANA	.186	11	.200*	.855	11	.050
CAR	.344	11	.001	.692	11	.000
a. Lilliefors Significance Correction						
*. This is a lower bound of the true significance.						

Source: Author's own estimate

Table 2 shows that the negative mean rank is higher than the positive mean rank in case of Total Advance as % to Total Deposit ratio (CDR ratio). This suggests that the Total Advance as % to Total Deposit (CDR ratio) position in post merger period is likely lesser than that in the pre merger period. So we can infer that the phenomenon of merger has turned down the Total Advance as % to Total Deposit (CDR ratio) position of the companies. Similar events happened in case of IDR, OOETE, CAR ratio indicating that phenomenon of merger had turned down the above mentioned financial parameters of the company.

Table 2: Wilcoxon Signed Ranks Test of merged entity of IDBI bank

Ranks		N	Mean Rank	Sum of Ranks
CDRpost - CDRpre	Negative Ranks	2[a]	1.50	3.00
	Positive Ranks	0[b]	.00	.00
	Ties	0[c]		
	Total	2		
IDRpost - IDRpre	Negative Ranks	2[d]	1.50	3.00
	Positive Ranks	0[e]	.00	.00
	Ties	0[f]		
	Total	6		
DPEpost - DPEpre	Negative Ranks	0[g]	.00	.00
	Positive Ranks	2[h]	1.50	3.00
	Ties	0[i]		
	Total	2		
OOETEpost - OOETEpre	Negative Ranks	2[j]	1.50	3.00
	Positive Ranks	0[k]	.00	.00
	Ties	0[l]		
	Total	2		
CARpost - CARpre	Negative Ranks	2[m]	1.50	3.00
	Positive Ranks	0[n]	.00	.00
	Ties	0[o]		
	Total	2		

a. CDRpost < CDRpre
b. CDRpost > CDRpre
c. CDRpost = CDRpre
d. IDRpost < IDRpre
e. IDRpost > IDRpre
f. IDRpost = IDRpre
g. DPEpost < DPEpre
h. DPEpost > DPEpre
i. DPEpost = DPEpre
j. OOETEpost < OOETEpre
k. OOETEpost > OOETEpre
l. OOETEpost = OOETEpre
m. CARpost < CARpre
n. CARpost > CARpre
o. CARpost = CARpre

Source: Author's own estimate

On the other hand, table 2 shows that the negative mean rank is less than the positive mean rank in case of deposit per employee (DPE). This suggests that the Deposit Per Employee measure (DPE) in post merger period is likely higher than that in the pre merger period. So we can infer that the phenomenon of merger has accentuated this performance parameter.

Table 3: Wilcoxon Test Ranks of merged entity of IDBI

Test Statistics[c]	CDRpost – CDRpre	IDRpost - IDRpre	DPEpost - DPEpre	OOETEpost - OOETEpre	CARpost - CARpre
Z	-1.342[a]	-1.342[a]	-1.342[b]	-1.342[a]	-1.342[a]
Asymp. Sig. (2-tailed)	.180	.180	.180	.180	.180
a. Based on positive ranks.					
b. Based on negative ranks.					
c. Wilcoxon Signed Ranks Test					

Source: Author's own estimate

By applying the Wilcoxon signed rank test, we can see that for all the 5 ratios, the significance level is more than 0.05 (0.18), therefore, the null hypothesis is accepted which indicates that there is no significant difference between the pre and the post-merger performance on the basis of CDR, IDR, DPE, OOETE and CAR of the IDBI bank. But, if we compare the individual ratio, we have found that the post-merger CDR, IDR, OOETE and

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CAR performance for all the two years has been despairing (declining trend) than the pre-merger period and DPE has happened to increase in post merger period.

Table 4: Paired Samples Statistics of IDBI and United Western Bank and merged entity of IDBI

		Mean	N	Std. Deviation	Std. Error Mean
			Paired Samples Statistics		
Pair 1	PSApre	11.27	2	2.489	1.76
	PSApost	20.255	2	2.439	1.72
Pair 2	APEpre	1.08106	2	111.086	78.54
	APEpost	1.0065	2	10.691	7.55
Pair 3	IITIpre	80.84	2	.0848	.060
	IITIpost	85.86	2	3.959	2.799
Pair 4	NIITIpre	19.16	2	.0848	.0599
	NIITIpost	14.14	2	3.959	2.80
Pair 5	IETEpre	82.46	2	.6788	.4799
	IETEpost	83.615	2	1.5768	1.115
Pair 6	EETEpre	5.255	2	.04949	.035
	EETEpost	4.495	2	.2616	.185
Pair 7	STApre	.330	2	.1414	.10
	STApost	.610	2	.1555	.11
Pair 8	IIAWFpre	4.93	2	2.234	1.58
	IIAWFpost	7.70	2	.7353	.52
Pair 9	NIIAWFpre	1.29	2	.3676	.26
	NIIAWFpost	1.255	2	.2899	.205
Pair 10	OPAWFpre	.715	2	.3606	.255
	OPAWFpost	1.085	2	.1484	.105
Pair 11	ROApre	.5050	2	.17678	.12500
	ROApost	.645	2	.03535	.025
Pair 12	NNPANApre	1.47	2	.56569	.40
	NNPANApost	1.12	2	.28284	.20

Source: Authors' own estimate

In case of   pre and post merger Priority sector advance as % to total advance ratio,(PSA pre & PSA post),since the calculated value of t (-256.7) for N=2 (as in Table 5) is greater than the table value (12.7062 at t $_{0.025}$,df =1), we reject the null hypothesis. The results are significant at 0.05 level of significance (p=.002). Therefore, the results of the above table show significant difference between pre and post M&A Priority sector advance as % to total advance ratio because the p-value is lesser than 0.05. Therefore, after merger and acquisition taken place, there is significant difference in the performance of the said IDBI bank in India as H_0 is rejected. This indicates that the means of the pre and post merger Priority sector advance as % to total advance ratio values are different significantly.

Table-5: Paired Samples t Test of IDBI and United Western Bank and merged entity of IDBI

Pair	Variables (Pre-Post)	Mean	Std. Deviation	Std. Error Mean	Lower	Upper	t	df	Sig. (2 tailed)
			Paired Differences		95% Confidence Interval of the Difference				
1	PSApre - PSApost	-8.985	.049497	.035	-9.42971	-8.5402	-256.7	1	.002
2	APEpre - APEpost	74.559	100.395	70.99	-827.45347	976.573	1.05	1	.484
3	IITIpre - IITIpost	-5.019	4.04465	2.86	-41.35974	31.3197	-1.755	1	.330
4	NIITIpre - NIITIpost	5.02	4.04465	2.86	-31.31974	41.3597	1.755	1	.330
5	IETEpre - IETEpost	-1.155	2.25567	1.5949	-21.42139	19.1113	-.724	1	.601
6	EETEpre - EETEpost	.760	.311126	.220	-2.03536	3.5553	3.455	1	.179
7	STApre - STApost	-.28	.014142	.010	-.407062	-.15293	-28.0	1	.023
8	IIAWFpre - IIAWFpost	-2.77	1.49906	1.059	-16.23857	10.698	-2.613	1	.233
9	NIIAWFpre - NIIAWFpost	.035	.657609	.465	-5.87338	5.9433	.075	1	.952
10	OPAWFpre - OPAWFpost	-.37	.509116	.36	-4.94423	4.2042	-1.028	1	.491
11	ROApre - ROApost	-.14	.212132	.15	-2.04593	1.7659	-.933	1	.522
12	NNPANApre – NNPANApost	.35	.28284	.20	-2.19124	2.8912	1.750	1	.330

Source: Author's own estimate

Similarly, in case of pre and post merger spread as a % to Total Assets (STApre and STApost), since the calculated value of t (-28.0) for N=2 (as in Table 5) is greater than the table value (12.7062 at t $_{0.025}$,df =1), we reject the null hypothesis. The results are significant at 0.05 level of significance (p=.023). Therefore, the results of the above table show significant difference between pre and post M&A pre and post merger spread as a % to Total Assets ratio because the p-value is lesser than 0.05. Therefore, after merger and acquisition taken place,

there is significant difference in the performance of the said IDBI bank in India as H_0 is rejected. This indicates that the means of the pre and post merger pre and post merger spread as a % to Total Assets ratio values are different significantly. Even some ratios individually depicts that there is slight increase or decrease in the financial performance of banks, but paired Samples t Test shows in this study that there is no significant impact.

Therefore, on the contrary, in case of pre and post merger (APEpre & APEpost), (IITIpre& IITI post) and (NIITIpre& NIITIpost), (IETEpre& IETEpost),(EETEpre & EETEpost),(IIAWFpre& IIAWFpost), (NIIAWFpre& NIIAWFpost), (OPAWFpre &OPAWFpost), (ROApre&ROApost), (NNPANApre &NNPANApost), since the calculated value of t (=1.05, -1.755, 1.755, -.724, 3.455,and -2.613, .075, -1.028, -.933, 1.750 respectively) for N=2 (as in pair 2,3,4,5,6and 8,9,10,11,12 in table-5) is lesser than the table value 12.7062 at t $_{0.025}$,df =1), we reject the null hypothesis. The results are not significant at 0.05 level of significance. Therefore, the results of the above table show that there are no significant difference between Pre and Post M&A (APEpre & APEpost), (IITIpre& IITI post) and (NIITIpre& NIITIpost), (IETEpre& IETEpost),(EETEpre & EETEpost),(IIAWFpre& IIAWFpost), (NIIAWFpre& NIIAWFpost), (OPAWFpre &OPAWFpost), (ROApre&ROApost), (NNPANApre &NNPANApost).This indicates that the means of the pre and post (APEpre & APEpost), (IITIpre& IITI post) and (NIITIpre& NIITIpost), (IETEpre& IETEpost),(EETEpre & EETEpost),(IIAWFpre& IIAWFpost), (NIIAWFpre& NIIAWFpost), (OPAWFpre &OPAWFpost), (ROApre&ROApost), (NNPANApre &NNPANApost), ratio values are not different significantly.

4. Conclusion and findings:

The result of the normality shows that the significant value of PSA, STA, NIIAWF , CAR of the HDFC bank during entire sample period 2000-01 to 2014-15(both pre-merger and post-merger) is less than 0.05, meaning that normality assumption has been violated. Since the significant values of each of the remaining variables is greater than 0.05, we do not reject the null hypothesis and conclude that these data do not violate the normality assumption.   The same result is also confirmed by the Shapiro-Wilk test. The result of the normality test conducted by Kolmogorov-Smirnov test as well as by the Shapiro–Wilk test   shows that out of 17 parameters(financial ratios) undertaken into our study for assessing significant impact of merger on sample banks' performance ,all parameters except of credit deposit ratio (CDR), investment-deposit ratio(IDR),deposit per employee(DPE), Other operating expenses as a % of total expenses (OOETE), Capita Adequacy Ratio (CAR)of the IDBI bank do not violate the normality assumption. Although Wilcoxon Signed Ranks Test of merged entity of IDBI bank indicates that the Total Advance to Total Deposit (CDR) ratio , investment-deposit ratio(IDR), Other operating expenses to total expenses (OOETE) , Capita Adequacy (CAR) ratio position in post merger period is likely lesser than that in the pre merger period and reversely, Deposit Per Employee measure (DPE) in post merger period is likely higher than that in the pre merger period., Wilcoxon Test Ranks suggest that there is no significant difference between the pre and the post-merger performance on the basis of credit deposit ratio (CDR), investment-deposit ratio(IDR),deposit per employee(DPE), Other operating expenses as a % of total expenses (OOETE), Capita Adequacy Ratio (CAR)of the IDBI bank. But, if we compare the individual ratio, we have found that the post-merger CDR,IDR, OOETE and CAR performance for all the two years has been despairing (declining trend) than the pre-merger period and DPE has happened to increase in post merger period.

Paired Samples t Test suggests that   there is significant difference in case of pre and post merger Priority sector advance as % to total advance ratio,(PSA pre & PSA post), pre and post merger spread as a % to Total Assets (STApre and STApost).On the contrary, there are no significant difference between Pre and Post M&A (APEpre & APEpost), (IITIpre& IITI post) and (NIITIpre& NIITIpost), (IETEpre& IETEpost),(EETEpre & EETEpost),(IIAWFpre& IIAWFpost), (NIIAWFpre& NIIAWFpost), (OPAWFpre &OPAWFpost), (ROApre&ROApost), (NNPANApre &NNPANApost).This indicates that the means of the pre and post (APEpre & APEpost), (IITIpre& IITI post) and (NIITIpre& NIITIpost), (IETEpre& IETEpost),(EETEpre & EETEpost),(IIAWFpre& IIAWFpost), (NIIAWFpre& NIIAWFpost), (OPAWFpre &OPAWFpost), (ROApre&ROApost), (NNPANApre &NNPANApost), ratio values are not different significantly.

In conclusion, it can be said that while dealing with mergers and acquisitions, synergy can be spawned in long run with the vigilant usage of the resources, accurate valuation of the target and estimating the future prospects. The success of mergers and acquisition deals depends on post merger integration process, timely action and to keep check on the costs of integration process. Formulation of policies regarding mergers should be made in such a way so that it joysticks monopoly and anti-competitive practices in banking sector of India.

References

Aharon David Y, Gavious Ilanit & Yosefa Rami (2010), "Stock Market Bubble Effects on Mergers and Acquisitions", The Quarterly Review Of Economics and Finance, vol.50, 456–470.

Anand Manoj & Singh Jagandeep (2008), Impact of merger announcement on shareholders wealth:Evidence from Indian Private sector banks, Vikalpa: Journal for Decision maker,vol.33(1), pp.35-54.

Bakker, HJC and Helmink,JWA(2004),*Successfully Integrating Two Businesses*,Gowar Publishing, Humpshire.

Bruner,R.F(2004),Applied mergers and acquisitions,John Wiley and Sons Inc,New Jersey.

Bhaumik, Sumon & Ekta Selarka (2008), Impact of M&A on firm performance in India: Implications for concentration of ownership and insider entrenchment, William Davidson Institute at the University of Michigan, Working Paper Number 907.

Panwar, S. (2011), Mergers & Acquisitions in Banking Industry – The Need of Hour,*International Journal of Contemporary Practices,* vol.1(2), p. 75-82.

Paul Kupiec and Yan Lee., 2012, What Factors Explain Differences in Return on Assets Among Community Banks? Federal Deposit Insurance Corporation, Proceedings of the Third International Conference on Global Business, Economics, Finance and Social Sciences (GB14Mumbai Conference) Mumbai, India. 19-21 December 2014 ISBN: 978-1-941505-21-2 Paper-ID:MF49812,www.globalbizresearch.org.

Shanmugam, B. & Nair, M. (2004), Mergers & Acquisitions of Banks in Malaysia, *Managerial Finance,*vol. *(4)* p. 1-18.

DeLong, G.L. (2003). Does Long Term Performance of Mergers Match Market Expectations? Evidence from the US Banking Industry, *Financial Management,* p. 5-25.

DePamphilis,D.M(2005),*Mergers, Acquisitions and other restructuring activities*, 4th Edition, Elsevier.Inc. London.

Devos, E., Kadapakkam, P.R., & Krishnamurthy, S. (2008), How Do Mergers Create Value? A Comparison of Taxes, Market Power, and Efficiency Improvements and Explanations for Synergies. *The Review of Financial Studies*,vol. 22(3), March 27, 2008.

Dickey, D.A and W.A.Fuller (1979), Distribution of estimators of Autoregressive Time series with a Unit Root, *Journal of the American Statistical Association*, vol.74,pp.427-31.

------(1981),Likelihood Ratio Test for Autoregressive Time Series with a Unit Root, *Econometrica*,vol.49,pp.1057-72.

Granger C.W.J. (1969), Investigating causal relations by econometric models and cross spectral methods, *Econometrica* ,vol.37.

Kuriakose Sony ,M.S Senam Raju, N.V.Narasimham(2009), Voluntary Amalgamations in Indian Granger, C.W.J. and P. New bold(1974), Spurious regressions in econometrics, *Journal of Econometrics* ,vol.2,pp. 111-120.

Granger, C. W. J. (1988) 'Some Recent Developments in the Concepts of Causality', *Journal of Econometrics*, 39:199-211

Banking Sector: Valuation Practices and Adequacy of Swap ratios,Electronic copy available at: http// issn.com/abastract=1653698.

Mantravadi Pramod & Reddy, A Vidyadhar (2007),Mergers and operating performance: Indian experience,The ICFAI Journal of mergers and Acquisitions,vol.4,no.4,pp52-66.

Mehta Jay & Kakani Ram Kumar(2006), "Motives for Mergers and Acquisitions in the Indian Banking Sector – A Note on Opportunities & Imperatives", SPJCM Working Paper: 06- 13, Retrieved From Http://Papers.Ssrn.Com/Sol3/Papers.Cfm?Abstract_Id=1008717.

Murthy,G.K(2007), Some cases of Bank merger in India : A study .In Bose,J(Ed), *Bank Mergers: The Indian Scenario*,(244-259), Hyderabad: The ICFAI University Press.

Müslümov Alövsat. (2002), "The Financial Analysis of Post merger Performance of Surviving Firms", *Yapi Kredi Economic Review*, Vol. 13(1), Retrieved from Http://Papers.Ssrn.Com/Sol3/Papers.Cfm?Abstract_Id=890063.

Sinha Pankaj & Gupta Sushant (2011),Mergers and Acquisitions: A pre and post analysis for the Indian financial services sector, MPRA Paper 31253,Online at: http://mpra.ub.uni-muenchen.de/31253.

Suresh Kumar(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 December 2013, Vol. 3, No. 12 ISSN: 2222-6990.

Paul.J(2003), Bank of Madura merger with ICICI Bank: An analysis,IIMB Management Review, vol.15(3),p40.

Paul Kupiec and Yan Lee(2012), What Factors Explain Differences in Return on Assets Among Community Banks? Federal Deposit Insurance Corporation, *Proceedings of the Third International Conference on Global Business, Economics, Finance and Social Sciences (GB14Mumbai Conference)* Mumbai, India. 19-21 December 2014 ISBN: 978-1-941505-21-2 Paper ID: MF498 12 www.globalbizresearch.org http://www.amcm.gov.mo/publication/quarterly/July2009/macaoprof_en.pdf

V.Radha Naga Sai and Dr.Syed Tabassum Sultan (2013) "Financial performance analysis in Banking sector- A Pre & Post Merger perspective" ABHINAN Vol,2,April 2013,ISSN 2320-0073 (pp56-66).

Sims, C. A. (1972): Money, Income and Causality, *American Economic Review*, vol. 4, pp. 540–542.

Saraswathi,K.V(2007),Crucial HR Management issues in Bank Consolidation: Some cases, .In Bose,J(Ed), *Bank Mergers: The Indian Scenario*,(226-243), Hyderabad