IMPACT OF MERGERS ON SHARE PRICE PERFORMANCE OF MERGED BANKS: AN EVENT STUDY

Dr. (Smt) A.N. Tamragundi
Associate Professor
P.G. Department of Commerce
Karnatak University, Dharwad
&
Devarajappa S
Assistant Professor of Commerce
University College of Arts
Tumkur University, Tumkur, devutta@gmail.com

ABSTRACT

The objective of the present paper is to examine impact of mergers on share price of merged banks in short term. Total six cases of merger were selected for the study. For the purpose of analysis, Event Study methodology is employed. For this purpose the data have been collected from CMIE data base and Yahoo finance database. To know the market reaction towards merger announcement, AR and CAR were calculated based on Market Adjusted Model and T statistics was used to know the significant AR. Further Researcher also examined the performance of public sector and private sector Banks. Finally the study reveals that, in a banking environment marked by frequent merger, such transaction directly or indirectly affect the shareholders sentiments and increase the market shares i.e merger enhance the performance and wealth for both businesses and shareholders.

Keywords: Mergers, Abnormal Return, CAR, Event Study

Introduction:

A merger is combination of two or more companies, generally by offering the stockholders of one company securities in acquiring company in exchange for the surrender of their stock. The reasoning behind any corporate merger is that, two companies together are more valuable than, if they were separate, because they increase shareholders value over and above that of the two separate firms (Varini Sharma, 2009). The rational of liberalization process in India is improved the productivity and efficiency of financial sector in general and the banking sector in particular. With the economic reforms and opening of an economy, Indian banking sector had gone through some considerable out of which two changes are worth monitoring, they are increased competition and falling interest rates. The industry has started restructuring their operations through M&A because their increasing exposure to competition both domestically and internationally.

To a large extent, this M&A strategy is based on a belief that gains can accrue through expense reduction, increased market power, reduced earnings volatility, and scale and scope economies. If consolidation does, in fact, lead to value gains, then shareholder wealth can be increased. On the other hand, if consolidating entities does not lead to the promised positive effects, then mergers may lead to a less profitable and valuable banking industry. Many researchers worldwide have empirically found that shareholders' wealth of the acquiring banks has decreased while it has been vice versa in the case of acquired firms.

In this paper an attempt has been made, to examine the impact of merger on share price performance in short term. Share price performance of acquiring banks in short term has been extensively studied empirically by using Event Study Methodology.

Literature Review

In today's liberalized economy the corporates have experienced a major restructuring through M&A route. Mergers and Acquisitions have been considered as a popular strategy for Growth and Expansion. Empirical studies in this field are few and far in number. Some attempts have been made in by scholars in the area of mergers which are reviewed and summary of studies on Shareholders wealth of merged banks are given below:

Contributors	Common findings
M Jayadev and Rudra Sensarma	In case of forced merger neither the bidder nor target banks shareholders have benefited In case of voluntary merger the bidder bank shareholders gained more than those of target bank
Gerard T O & Michael S P(2005)	The acquiring banks dividend are economically significant determinants of merged banks abnormal stock return performance
Dr. K Das et al (2009)1	An Average wealth not significantly effect by Mergers and Acquisition
Deo and Shah (2011), Honston et al (2001)	The merger announcements have no significant impact on the bidder portfolio. However M&A create significant positive abnormal return for target shareholders

Hypotheses of the Study:

This hypothesis focuses on Impact of Mergers on short term share price performance of merged banks. The dimension used for analysis is Abnormal Return (AR) and Cumulative Abnormal Return (CAR)

H_0**:** *Mergers announcement do not have any significant impact on wealth of Merged Bank Shareholders.*

H_1**:** *Mergers announcement do not have any significant impact on wealth of Merged Bank Shareholders.*

Research Methodology:

Sample Descriptions:

As the complete sources of information of all the banks is not available, the data for this study have been selected based on the convenience sampling method, among the banks list with RBI Report. In the list of commercial banks only six scheduled commercial banks merged during the period 2004 to 2008 were selected. During the course of study two major categories of mergers were identified and accordingly six banks are divided into three Private and Public and remaining three as Private and Private and the same is presented in Table-1

In order to evaluate post merger financial performance of the merging banks in the long run, at least 10 years financial data is required i.e., five years pre merger period and five years post merger period. Only domestic mergers were selected. Cross-border mergers, i.e., in which either bidder or the target was based outside India were dropped. This was done to ensure homogeneity of the economic and industrial environment so that generalizability of the results could be achieved for Indian Mergers.

Table-1

The list of Selected Merged Banks

S. No	Target Bank	Acquiring Bank	Category	Date of Merger
1	South Gujarat Local Area Bank Ltd.	Bank of Baroda	**Pr-P**	25-6-2004
2	Global Trust Bank Ltd.	Oriental Bank of Commerce	**Pr-P**	14-8-2004
3	Bharat Overseas Bank Ltd.	Indian Overseas Bank	**Pr-P**	31-3-2007
4	Ganesh Bank of Kurundwad Ltd.	Federal Bank Ltd.	**Pr-Pr**	2-9-2006
5	Sangli Bank Ltd.	ICICI Bank Ltd.	**Pr-Pr**	19-4-2007
6	Centurion Bank of Punjab Ltd.	HDFC Bank Ltd.	**Pr-Pr**	23-5-2008

Note: P=Public sector Pr=Private Sectors

Event Study Methodology:

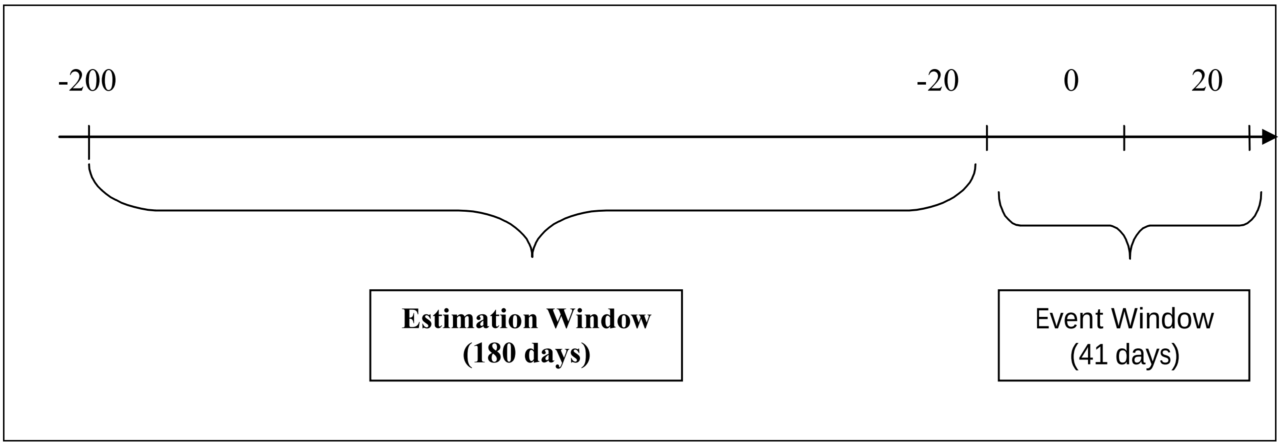
Event Study methodology is one of the most frequently used analytical tools in research. The objective of an Event Study is to assess whether there any abnormal or excess return earned by security holders accompanying specific events (e.g., earnings announcements, merger announcements, stock splits) where an abnormal return is the difference between observed return and that appropriate given in a particular return generating model (Pamela P. Peterson 1989).

Essentially, the event study analysis the stock return (based on price changes) of acquirer firms or target firms or both relative to portfolio of stocks representing the market. Upon the announcement of a merger between two or more firms, the market 'learns' new information and adjust to a new level. This new information incorporated into stock prices reflects shareholder's perception about impact of mergers on the future profit stream from the merged entity. Differences in returns of acquiring firm or target firm relatively to market returns are usually calculated over period of ranging from one day to many days or weeks leading up to and following the event of merger announcement. In making the calculations, the investigator seek to determine whether the announcement of merger causes the stock return acquiring firm to perform differently than the general market returns for stocks.

Applying the well established methodology of event study, the researcher divided the total period of analysis in respect of each acquirer in to two major period's viz. 'Estimation Window' and 'Event Windows' the same is depicted in figure 1.

The event window covers the period surrounding the announcement of merger. The date of announcement of merger is termed as 't' day. The period before t day is called as pre-announcement period (20 days) while period after t day is called as post announcement period (20 days). Studies examining wealth creation effect of merger typically employed short term announcement periods around announcement date. This is due to the fact that though merger negotiation takes place in secrecy, the information tends to leak out and market starts speculating about potential benefits of mergers to acquirer firms.

Figure-1: Event Window and Clean Estimation Period



To estimate the abnormal return (AR) for security 'I' at time't' Market Adjusted Model were used. According to this model, the market return is simply subtracted from the corresponding security return over a given period of 't' as given below:

$$\mathbf{AR_{it}=R_{it}-(E)R_{it}} \qquad \text{Eq. (1)}$$

Where, AR_{it} is the abnormal returns on acquirer I's stock at time t in the in the event window, R_{it} is the actual return on acquirer I's stock and and $E(R_{it})$ is its expected return. For the purpose of computing expected return, the market model, depicting a linear relationship between acquirer's stock return and the market return is used. Thus

$$\mathbf{E(R_{it})=\alpha_i+\beta_i R_{mt}} \qquad \text{Eq. (2)}$$

Where R_{mt} is the return on market Index (BSE Sensex in this study) during the estimation window period and the alpha (α_i) and beta (β_i) are the firm specific coefficient, which are computed by regressing market returns on stock returns during estimation window. The estimation window comprises of time period 180 days prior to t-20.

The abnormal returns so computed in Eq. (1) above are then used to compute Cumulative Abnormal Returns (CAR) as under:

$$\mathbf{CAR_i = \sum_{T=T1}^{T3} AR_{it}} \qquad \text{Eq. (3)}$$

Where CAR_i is Cumulative Abnormal Returns on acquirer i's Stock for event window and AR_i is the abnormal returns on stock i.

Analysis and Interpretation:

1. **Bank of Baroda acquiring South Gujarat Local Area Bank Ltd.**

Table-2, presents the abnormal returns and cumulative abnormal returns for days -20 to +20 surrounding the official announcement of Bank of Baroda and South Gujarat Local Area Bank Ltd. An examination of the table showed that, AR is negative for 23 days out of 41 days event window.

AR is significant only on first day (-20) of event window (AR=-0.1111, t=2.52, P<0.05), except this, the rest of 40 days AR, either positive or negative is found to be statistically insignificant at conventional level and CAR value is negative during whole event window.

Therefore it indicates that, market did not give much give much importance to the leakage of merger information and exhibited no reaction to it.

The graph of AR of event window (-20, +20) depicted in Figure- 2, shows that, the abnormal return is highest during the event window (+18, +19, +20) and CAR shown in Figure-3, reveals that, CAR is moving towards positive line since from 12th day after the announcement of merger.

Figure-2
Shows the relationship between abnormal return to time during the event period (day -20 to +20)

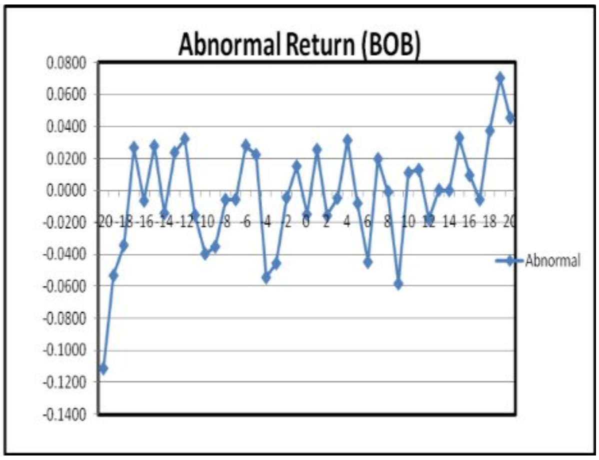
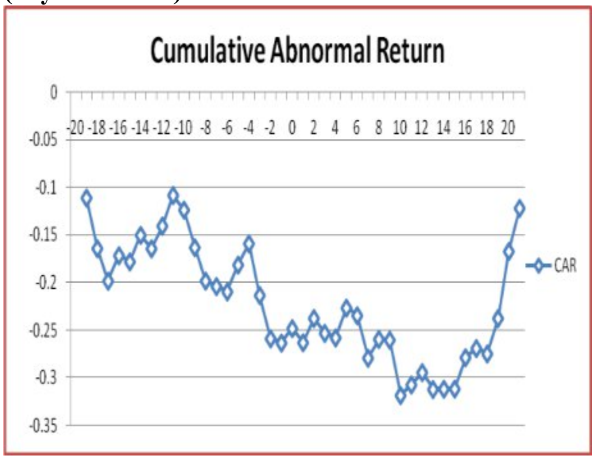


Figure-3
Shows the relationship between Cumulative abnormal return to time during the event period (day -20 to +20)



2. Oriental Bank of Commerce acquiring Global Trust bank Ltd

Table-2 presents the abnormal returns (ARs) and Cumulative Abnormal returns (CARs) for 41 days event period (20 days before and 20 days after the announcement of merger) against acquisition of Global Trust bank Ltd by Oriental Bank of Commerce. It can be seen from the table that, AR is negative for 21 days out of 41 days window. The AR is negative 9 days before and 11 days after the announcement. The negative AR is statistically significant on day -13 (AR=0.0828, t=-1.946, p=0.10) in the event window. AR is positive before the announcement period (-20 to -16) but which is not statistically significant at required hypothetical level.

The CAR before the announcement period (-20 to -1 day) are positive for 11 days out of 20 days, during the period (-20 to -14) CAR increased up to 8.338%. The day after the announcement CAR is negative all days of event window.

It is therefore, concluded that, the market initially responded to leakage of acquisition information. After official announcement, market then reacted negatively and resulted in the destruction of the wealth of the shareholders of Oriental Bank of Commerce (OBC).

The graph of AR of event window (-20, +20) depicted in Figure-4, shows that, the abnormal return is highest during -6th day (4.16%) of event window and CAR shows in Figure-5, reveals that, there is a consistent fall in CAR after the announcement of merger.

Figure-4
Shows the relationship between abnormal return to time during the event period (day -20 to +20)

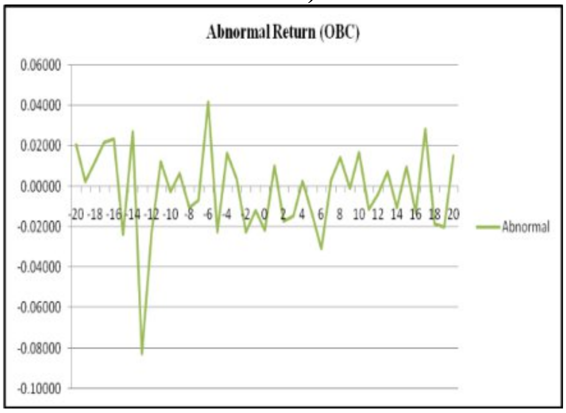
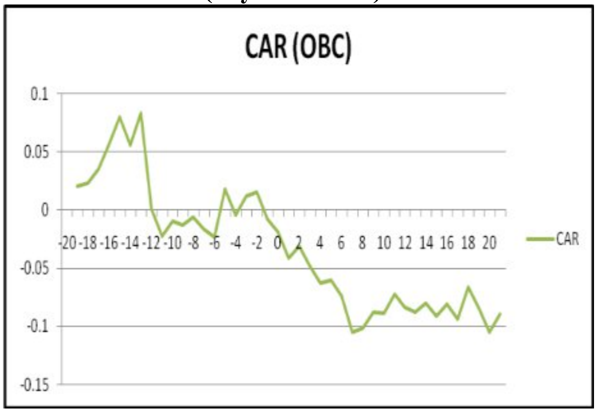


Figure-5
Shows the relationship between Cumulative abnormal return to time during the event period (day -20 to +20)



3. Indian Overseas Bank acquiring Bharat Overseas Bank

Table-2, presents the abnormal returns and cumulative abnormal returns for days -20 to +20 surrounding the official announcement of Indian Overseas bank and Bharat Overseas Bank. An examination of the table showed that, AR is negative for 20 days out of 41 days event window.

AR is significant only on 3rd day (-18) of event window (AR=-0.0569, t=-1.91, P<0.10), except this, the rest of 40 days AR, either positive or negative is found to be statistically insignificant at conventional level. AR on the day of event '0' is positive but it is not statistically significant. The CARs before the announcement period is positive only 7 days (-20, -19, -6 to -4, -2 and -1) and only 6 days after the announcement of merger (+14, +16 to 20).
Therefore it is inferred that, market did not give much importance to the leakage of merger information and exhibited no reaction to it.

The graph of AR of event window (-20, +20) depicted in Figure-6, shows that, no consistent pattern of the abnormal return and CAR shown in Figure-7, reveals that, CAR is moving towards positive line since on 14th day after the announcement of merger.

Figure-6
Shows the relationship between abnormal return to time during the event period (day -20 to +20)

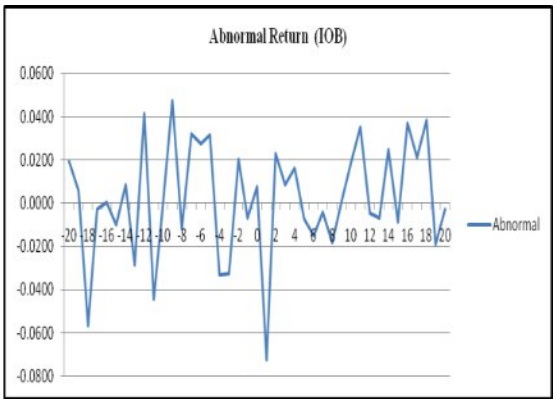


Figure-7
Shows the relationship between Cumulative abnormal return to time during the event period (day -20 to +20)

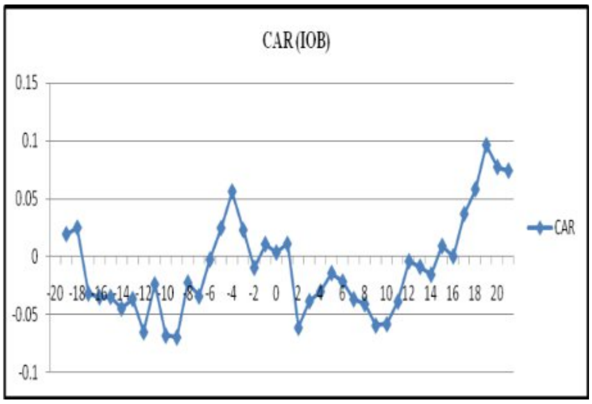


Table-2

Result of Abnormal return, CAR ant Statistical test of BOB, OBC and IOB

Event Days	**BOB**			**OBC**			**IOB**		
	AR	CAR	T-stat	AR	CAR	T-stat	AR	CAR	T-stat
-20	-0.1111**	-0.1111	-2.5280	0.02051	0.02051	0.48245	0.0191	0.0191	0.6403
-19	-0.0531	-0.1642	-1.2085	0.00221	0.02272	0.05194	0.0056	0.0247	0.1871
-18	-0.0342	-0.1984	-0.7782	0.01235	0.03507	0.29057	-0.0569***	-0.0322	-1.9079
-17	0.0268	-0.1716	0.6093	0.02168	0.05675	0.50992	-0.0031	-0.0354	-0.1049
-16	-0.0064	-0.1780	-0.1459	0.02340	0.08014	0.55036	0.0002	-0.0352	0.0060
-15	0.0278	-0.1502	0.6337	-0.02395	0.05619	-0.56351	-0.0100	-0.0452	-0.3355
-14	-0.0141	-0.1643	-0.3217	0.02719	0.08338	0.63966	0.0082	-0.0370	0.2745
-13	0.0238	-0.1405	0.5408	-0.08275**	0.00063	-1.94666	-0.0287	-0.0657	-0.9632
-12	0.0322	-0.1083	0.7333	-0.02285	-0.02222	-0.53754	0.0415	-0.0242	1.3906
-11	-0.0153	-0.1236	-0.3489	0.01236	-0.00987	0.29072	-0.0444	-0.0687	-1.4895
-10	-0.0395	-0.1631	-0.8985	-0.00284	-0.01270	-0.06678	-0.0015	-0.0702	-0.0505
-9	-0.0350	-0.1982	-0.7973	0.00653	-0.00618	0.15350	0.0473	-0.0229	1.5847
-8	-0.0057	-0.2039	-0.1307	-0.01058	-0.01676	-0.24897	-0.0118	-0.0347	-0.3958
-7	-0.0056	-0.2095	-0.1279	-0.00685	-0.02361	-0.16104	0.0318	-0.0029	1.0674
-6	0.0281	-0.1814	0.6392	0.04159	0.01799	0.97845	0.0273	0.0244	0.9147
-5	0.0224	-0.1591	0.5087	-0.02274	-0.00475	-0.53484	0.0316	0.0560	1.0581
-4	-0.0543	-0.2134	-1.2356	0.01632	0.01157	0.38399	-0.0333	0.0226	-1.1168
-3	-0.0454	-0.2588	-1.0338	0.00340	0.01497	0.08003	-0.0326	-0.0099	-1.0929
-2	-0.0045	-0.2633	-0.1026	-0.02248	-0.00751	-0.52887	0.0203	0.0104	0.6816
-1	0.0151	-0.2482	0.3444	-0.01198	-0.01949	-0.28184	-0.0071	0.0033	-0.2384
0	-0.0149	-0.2630	-0.3381	-0.02172	-0.04121	-0.51099	**0.0074**	**0.0107**	**0.2475**
1	0.0256	-0.2375	0.5821	0.01023	-0.03098	0.24060	-0.0726**	-0.0619	-2.4331
2	-0.0157	-0.2531	-0.3566	-0.01720	-0.04818	-0.40453	0.0230	-0.0389	0.7713
3	-0.0047	-0.2579	-0.1079	-0.01460	-0.06278	-0.34335	0.0084	-0.0305	0.2821
4	0.0313	-0.2266	0.7124	0.00270	-0.06007	0.06355	0.0159	-0.0146	0.5329
5	-0.0080	-0.2346	-0.1828	-0.01411	-0.07419	-0.33203	-0.0073	-0.0219	-0.2462
6	-0.0446	-0.2792	-1.0156	-0.03102	-0.10521	-0.72969	-0.0152	-0.0372	-0.5109
7	0.0197	-0.2595	0.4494	0.00321	-0.10200	0.07558	-0.0043	-0.0414	-0.1427
8	-0.0008	-0.2603	-0.0185	0.01422	-0.08778	0.33441	-0.0185	-0.0599	-0.6206
9	-0.0581	-0.3184	-1.3225	-0.00110	-0.08888	-0.02590	0.0012	-0.0588	0.0387
10	0.0111	-0.3073	0.2525	0.01664	-0.07224	0.39149	0.0194	-0.0393	0.6520
11	0.0130	-0.2943	0.2956	-0.01140	-0.08364	-0.26810	0.0350	-0.0044	1.1725
12	-0.0177	-0.3120	-0.4036	-0.00405	-0.08769	-0.09539	-0.0048	-0.0091	-0.1598
13	0.0004	-0.3117	0.0081	0.00711	-0.08058	0.16722	-0.0069	-0.0160	-0.2303
14	0.0001	-0.3116	0.0023	-0.01049	-0.09107	-0.24682	0.0249	0.0089	0.8337
15	0.0330	-0.2786	0.7508	0.00977	-0.08130	0.22992	-0.0089	-0.0001	-0.3000
16	0.0096	-0.2690	0.2174	-0.01313	-0.09443	-0.30889	0.0367	0.0366	1.2304
17	-0.0057	-0.2748	-0.1301	0.02815	-0.06628	0.66223	0.0212	0.0578	0.7112
18	0.0373	-0.2375	0.8488	-0.01862	-0.08490	-0.43803	0.0383	0.0961	1.2840
19	0.0702	-0.1673	1.5981	-0.02013	-0.10503	-0.47350	-0.0191	0.0771	-0.6389
20	0.0454	-0.1219	1.0327	0.01507	-0.08996	0.35459	-0.0031	0.0740	-0.1038

Source: Computed on the basis of Yahoofinance data base

**Significant at 1% level, **Significant at 5% level ***Significant at 10% leve*

4. **Federal Bank ltd acquiring the Ganesh Bank of Kurundwad Ltd**

Table 3, shows the shareholder's reaction to Federal Bank Ltd takeover of Ganesh Bank of Kurundwad Ltd in terms abnormal return and cumulative abnormal return (CAR). It can be seen that, the AR on day -2 (7.37%) is positive and significant at 1 percent level (t=2.65, p<0.01). moreover, 10 more event days in pre-announcement period, the AR is positive but insignificant, the positive AR on most of the event days in pre announcement period have revealed that, the market has anticipated the acquisition deal and reacted somewhat favorable to leakage of such information. The positive AR of 1.11% on official announcement day (event day) has further supported the favorable reaction of market to Federal Bank's activity of acquiring Ganesh Bank of Kurundwad Ltd.

The positive reaction to the event seems to be prevailing in the post acquisition period also. Because AR is positive on the next day of the event day (+1) and which is significant at 5 percent level of significance (AR=5.51%, t=1.984) and on day +8, AR is 13.21% which is significant at 1 percent level (t=4.754). The CAR value is positive for 34 days out of 41 days event window.

From the entire above scenario, it is apparent that, there has been positive wealth effect for shareholder's of Federal Bank.

The graph of AR of event window (-20, +20) depicted in Figure-8, shows that, no consistent pattern of the abnormal return and CAR shown in Figure-9, reveals that, the highest CAR is recorded after the announcement of merger.

Figure-8
Shows the relationship between abnormal return to time during the event period (day -20 to +20)

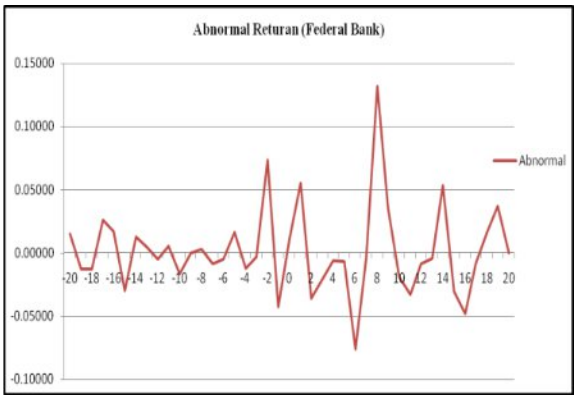
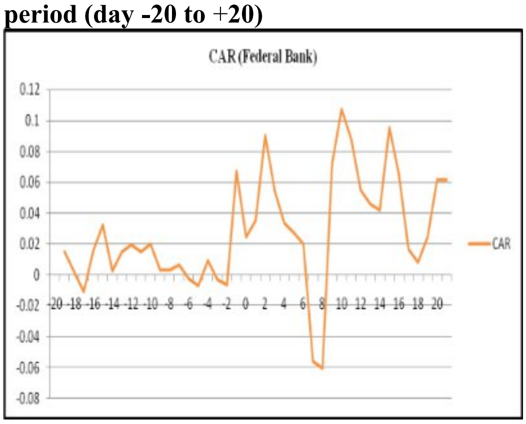


Figure-9
Shows the relationship between Cumulative abnormal return to time during the event period (day -20 to +20)



ICICI Bank acquiring the Sangli Bank Ltd

Table-3 presents the daily abnormal return and cumulative abnormal return for 41 days event period (20 days before and 20 days after the announcement of merger) against the acquisition of Sangli Bank by ICICI Bank. It can be seen from the table that, the AR is positive 22 days out of 41event days (including announcement day). The AR is positive for 11 days before and 11 days after the announcement.

From the table AR on day -20 (AR=0.0366, t=1.667, p<0.10), -19 (AR=0.0554, t=2.525, p<0.05), -18 (AR=0.0424, t=1.932, p<0.05), -8 (AR=0.0706, t=3.21, p<0.01), days before the official announcement of M&A is positive and significant at required hypothetical level. AR on day -4 to -1 is positive but not significant. Therefore, it shows that, the leakage of information about acquisition activity of ICICI Bank as favorable information initially. But favor reactions of the investor did not sustain for long.

On the official announcement day (t=0), as well as on day 1, the AR is negative revealing the selling pressure. In the post announcement period, AR is found to be positive 11 days out of 20 days and significant at 10 percent level on 17th event day. Significantly, during 41 days event window, the AR is negative for only few days. Further CAR value is positive 31 days out of 41 days event window. From the above it is cleared that, market has anticipated and welcomed the merger activity of ICICI Bank in turn resulting in increased the wealth to the shareholders.

The graph of AR of event window (-20, +20) depicted in Figure-10, shows that, no consistent pattern of the abnormal return and CAR shown in Figure-11, reveals that, the highest CAR is before the announcement of merge

Figure-10
Shows the relationship between Cumulative abnormal return to time during the event period (day -20 to +20)

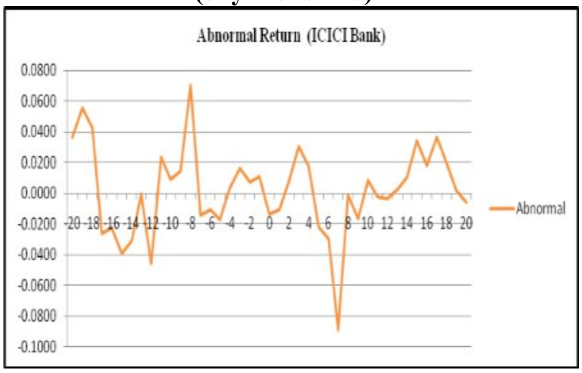
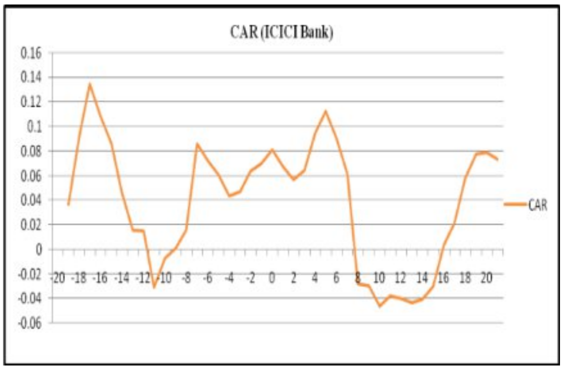


Figure-11
Shows the relationship between Cumulative abnormal return to time during the event period (day -20 to +20)



5. HDFC Bank Acquiring the Bank of Punjab

Table -3 exhibits the abnormal returns and Cumulative abnormal returns for event -20 to +20 surrounding the official announcement of HDFC Bank acquisition of Bank of Punjab Ltd, An examination of the table showed that, AR is positive and significant only on day +5 and +17 at 5 percent level. The rest of the window period, AR either positive or negative, is insignificant. The CAR value is also negative during whole post announcement period.

Figure-12
Shows the relationship between abnormal return to time during the event period (day -20 to +20)

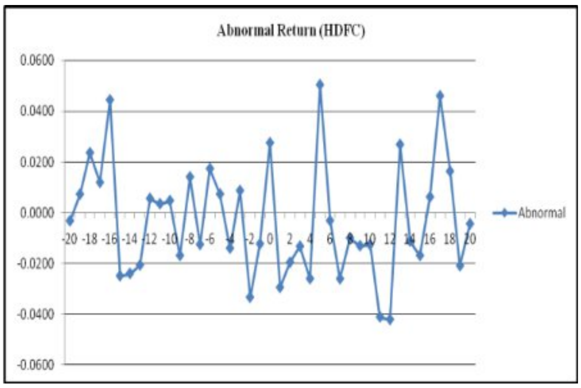
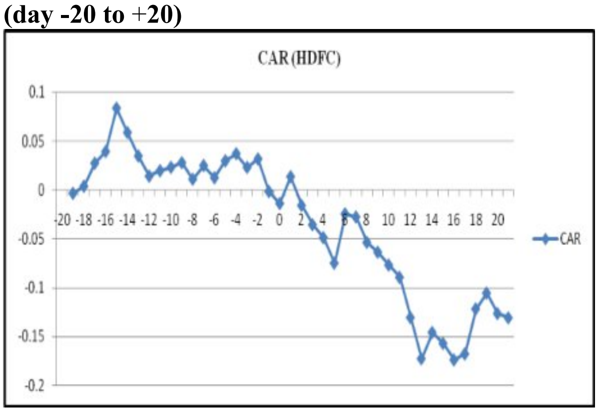


Figure-13
Shows the relationship between Cumulative abnormal return to time during the event period (day -20 to +20)



Therefore the market is found to be reluctant towards merger of HDFC Bank and destruction in shareholder's value during value during event period.

The graph of AR of event window (-20, +20) depicted in Figure-12, shows that, no consistent pattern of the abnormal return and CAR shown in Figure-13, reveals that, there is a consistent fall in CAR after the announcement of mergers.

Table-3
Result of Abnormal return, CAR ant Statistical test of Federal Bank, ICICI Bank and HDFC Bank

Event Days	**Federal Bank**			**ICICI Bank**			**HDFC Bank**		
	AR	CAR	T-stat	0.0366***	0.0366	1.6677	-0.0033	-0.0033	-0.1178
-20	0.01496	0.01496	0.53854	0.0554**	0.0920	2.5252	0.0073	0.0040	0.2620
-19	-0.01283	0.00214	-0.46166	0.0424	0.1345	1.9325	0.0236	0.0276	0.8518
-18	-0.01280	-0.01066	-0.46063	-0.0262	0.1083	-1.1932	0.0119	0.0396	0.4305
-17	0.02632	0.01565	0.94716	-0.0226	0.0856	-1.0303	0.0445	0.0841	1.6039
-16	0.01678	0.03244	0.60400	-0.0393	0.0464	-1.7889	-0.0250	0.0591	-0.8998
-15	-0.02991	0.00253	-1.07651	-0.0310	0.0154	-1.4113	-0.0240	0.0351	-0.8665
-14	0.01280	0.01533	0.46077	-0.0007	0.0147	-0.0300	-0.0207	0.0143	-0.7470
-13	0.00445	0.01978	0.16010	-0.0457**	-0.0310	-2.0824	0.0056	0.0199	0.2009
-12	-0.00484	0.01494	-0.17417	0.0232	-0.0077	1.0578	0.0035	0.0234	0.1253
-11	0.00503	0.01997	0.18109	0.0088	0.0011	0.4011	0.0047	0.0281	0.1699
-10	-0.01668	0.00329	-0.60011	0.0144	0.0154	0.6550	-0.0169	0.0112	-0.6109
-9	0.00006	0.00335	0.00204	0.0706*	0.0860	3.2159	0.0141	0.0252	0.5074
-8	0.00315	0.00650	0.11338	-0.0142	0.0719	-0.6452	-0.0126	0.0127	-0.4528
-7	-0.00872	-0.00222	-0.31390	-0.0109	0.0610	-0.4957	0.0174	0.0300	0.6261
-6	-0.00490	-0.00712	-0.17621	-0.0173	0.0437	-0.7883	0.0073	0.0373	0.2635
-5	0.01644	0.00932	0.59167	0.0035	0.0471	0.1581	-0.0140	0.0233	-0.5056
-4	-0.01240	-0.00308	-0.44634	0.0160	0.0632	0.7299	0.0087	0.0320	0.3122
-3	-0.00325	-0.00633	-0.11710	0.0070	0.0701	0.3168	-0.0334	-0.0014	-1.2044
-2	0.07373*	0.06739	2.65327	0.0108	0.0809	0.4926	-0.0123	-0.0137	-0.4441
-1	-0.04285	0.02455	-1.54196	-0.0137	0.0673	-0.6223	0.0275	0.0138	0.9929
0	0.01105	0.03560	0.39779	-0.0106	0.0567	-0.4813	-0.0295	-0.0157	-1.0644
1	0.05514**	0.09074	1.98452	0.0074	0.0641	0.3389	-0.0197	-0.0354	-0.7087
2	-0.03641	0.05434	-1.31022	0.0307	0.0948	1.3968	-0.0133	-0.0487	-0.4797
3	-0.02080	0.03354	-0.74849	0.0173	0.1121	0.7883	-0.0261	-0.0748	-0.9399
4	-0.00607	0.02747	-0.21856	-0.0218	0.0903	-0.9946	0.0504	-0.0243	1.8181
5	-0.00710	0.02037	-0.25538	-0.0297	0.0606	-1.3512	-0.0032	-0.0275	-0.1142
6	-0.07642*	-0.05605	-2.75028	-0.0890*	-0.0284	-4.0537	-0.0261	-0.0536	-0.9406
7	-0.00424	-0.06029	-0.15268	-0.0012	-0.0295	-0.0525	-0.0100	-0.0636	-0.3600
8	0.13212*	0.07183	4.75479	-0.0169	-0.0464	-0.7679	-0.0131	-0.0767	-0.4719
9	0.03555	0.10738	1.27936	0.0084	-0.0380	0.3816	-0.0127	-0.0893	-0.4568
10	-0.01892	0.08846	-0.68087	-0.0021	-0.0401	-0.0956	-0.0412	-0.1305	-1.4853
11	-0.03341	0.05505	-1.20228	-0.0035	-0.0436	-0.1596	-0.0422	-0.1727	-1.5204
12	-0.00873	0.04632	-0.31400	0.0028	-0.0408	0.1254	0.0269	-0.1458	0.9690
13	-0.00426	0.04206	-0.15335	0.0104	-0.0304	0.4746	-0.0112	-0.1570	-0.4044
14	0.05372***	0.09578	1.93322	0.0340	0.0036	1.5502	-0.0169	-0.1740	-0.6109
15	-0.03087	0.06491	-1.11102	0.0177	0.0214	0.8085	0.0062	-0.1678	0.2227
16	-0.04827	0.01664	-1.73705	0.0365***	0.0579	1.6641	0.0461	-0.1217	1.6608
17	-0.00802	0.00862	-0.28854	0.0195	0.0773	0.8864	0.0163	-0.1054	0.5876
18	0.01611	0.02473	0.57976	0.0017	0.0790	0.0753	-0.0210	-0.1264	-0.7571
19	0.03729	0.06203	1.34211	-0.0059	0.0731	-0.2703	-0.0044	-0.1309	-0.1594
20	-0.00012	0.06190	-0.00441						

Source: Computed on the basis of Yahoofinance data base

**Significant at 1% level, **Significant at 5% level ***Significant at 10% level*

6. Performance of Public Sector and Private Sector Banks

To evaluate market reaction to public sector and private sector bank's activities acquiring other private limited banks, the AAR and CAAR for 20 days surrounding the event day (41 days event period) based on market adjusted model are given in **table -4**

Public Sector Banks

According to **table-4**, during pre announcement period, the risk adjusted average abnormal return (AAR) is negative for 14 days out of 20 days, n which 8 days (-20, -19, -18, -11, -10, -8, -4 &-3) AAR is negative and significant at 1 percent level. During period after the announcement, the AAR is negative on +1 to +3, +5, +6, +8, +9 & +12 and significant at 1 percent level. On the day of event the AAR is negative and significant at 1 percent level. The CAAR is negative during the whole window period. Significantly, the AAR is positive only for few days.The above picture implies that, the market has anticipated the merger events in public sector banks and considered the merger activity as unfavorable, in turn destructing the shareholders wealth.

Private Sector Banks

According to **table -4**, AAR of public sector bank is positive for 21 days out of 41 days window period. During pre announcement period AAR is positive for 11 days out of 20 days, in which AAR is significant at 1 percent level on day -20 (AAR=0.0161, t=6.05), -19 (AAR=0.0166, t=6.24), -18 (AAR=0.0177, 6.67) -16 (AAR=0.0129, t=4.84) -11 (AAR=0.106 , t=3.9745) -8 (AAR=0.0293, t=11.009), -3 (AAR=0.0071, t=2.68), -2 (AAR=0.0158, t=5.922). Though the significant negative AAR in some days of pre announcement period, it can be said that, market has anticipated the merger activity and considered the activity as favorable. On the day of event the AAR is also positive and significant at 1 percent level (AAR=0.0083, t=3.123), this is further supported the favorable positive reaction of the market to private sector banks. During post merger period also positive 9 days out of 20 days and which is significant on +1(AAR=0.005, t=1.88, $p<0.10$), +5 (AAR=0.0072, $t<2.69$ $p<0.05$), on +13, +14, +17 & +18 AAR is positive and significant at 1 percent level.

From the above it is cleared that, market has anticipated and welcomed the merger activity of Private sector Banks in turn resulting in increased the wealth to the shareholder.

Table-4

Result of Average Abnormal return, CAAR ant Statistical test of Public Sector Banks and Private Sector Banks

	Public sector Banks			Private sector Banks		
Event Days	**AAR**	**CAAR**	**t-test**	**AAR**	**CAAR**	**t-test**
-20	-0.0238	-0.0238	-9.8335	0.0161	0.0161	6.0512
-19	-0.0151	-0.0389	-6.2324	0.0166	0.0327	6.2472
-18	-0.0262	-0.0652	-10.8312	0.0177	0.0505	6.6701
-17	0.0151	-0.0501	6.2374	0.0040	0.0545	1.5117
-16	0.0057	-0.0443	2.3623	0.0129	0.0674	4.8419
-15	-0.0021	-0.0464	-0.8472	-0.0314	0.0360	-11.7926
-14	0.0071	-0.0393	2.9268	-0.0141	0.0219	-5.2876
-13	-0.0292	-0.0685	-12.0598	-0.0056	0.0163	-2.1206
-12	0.0169	-0.0516	6.9902	-0.0150	0.0013	-5.6344
-11	-0.0158	-0.0674	-6.5144	0.0106	0.0119	3.9745
-10	-0.0146	-0.0820	-6.0306	-0.0011	0.0108	-0.3955
-9	0.0063	-0.0757	2.5842	-0.0008	0.0100	-0.3142
-8	-0.0094	-0.0851	-3.8632	0.0293	0.0393	11.0009
-7	0.0065	-0.0786	2.6669	-0.0118	0.0274	-4.4402
-6	0.0323	-0.0463	13.3378	0.0005	0.0280	0.1986

-5	0.0104	-0.0359	4.2943	0.0021	0.0301	0.8071
-4	-0.0238	-0.0597	-9.8047	-0.0077	0.0225	-2.8755
-3	-0.0249	-0.0845	-10.2595	0.0071	0.0296	2.6841
-2	-0.0022	-0.0867	-0.9153	0.0158	0.0454	5.9221
-1	-0.0013	-0.0881	-0.5488	-0.0148	0.0306	-5.5559
0	-0.0097	-0.0978	-4.0218	0.0083	0.0389	3.1232
1	-0.0122	-0.1101	-5.0527	0.0050	0.0439	1.8862
2	-0.0033	-0.1134	-1.3608	-0.0162	0.0277	-6.0911
3	-0.0036	-0.1170	-1.4969	-0.0011	0.0266	-0.4314
4	0.0166	-0.1004	6.8627	-0.0049	0.0216	-1.8588
5	-0.0098	-0.1102	-4.0517	0.0072	0.0288	2.6930
6	-0.0303	-0.1405	-12.4967	-0.0364	-0.0076	-13.6856
7	0.0062	-0.1342	2.5662	-0.0398	-0.0474	-14.9462
8	-0.0017	-0.1359	-0.7005	0.0403	-0.0071	15.1557
9	-0.0193	-0.1553	-7.9837	0.0019	-0.0052	0.7021
10	0.0157	-0.1396	6.4903	-0.0077	-0.0130	-2.9079
11	0.0122	-0.1274	5.0301	-0.0256	-0.0385	-9.6085
12	-0.0088	-0.1362	-3.6478	-0.0181	-0.0567	-6.8145
13	0.0002	-0.1360	0.0882	0.0085	-0.0482	3.1778
14	0.0048	-0.1312	1.9906	0.0176	-0.0306	6.6293
15	0.0113	-0.1199	4.6524	-0.0046	-0.0352	-1.7271
16	0.0111	-0.1088	4.5617	-0.0081	-0.0433	-3.0494
17	0.0146	-0.0943	6.0053	0.0249	-0.0184	9.3418
18	0.0190	-0.0753	7.8364	0.0173	-0.0011	6.4970
19	0.0103	-0.0650	4.2663	0.0060	0.0049	2.2484
20	0.0191	-0.0458	7.8920	-0.0035	0.0014	-1.3126

Source: Computed on the basis of Yahoofinance data base

**Significant at 1% level, **Significant at 5% level ***Significant at 10% level*

Figure-14
Shows the relationship between Average Abnormal Return (ARR) to time during the event period (day -20 to +20)

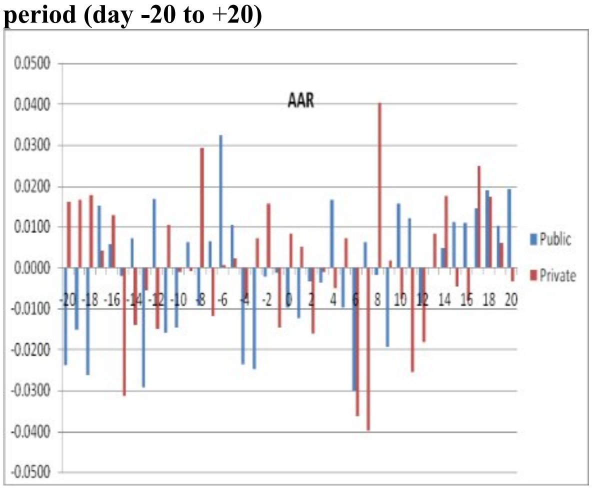
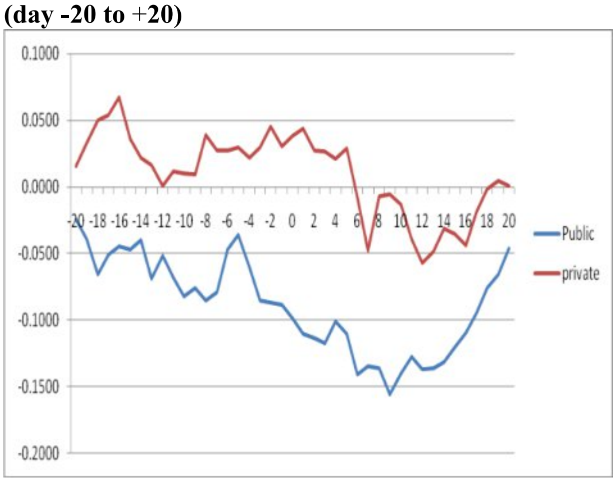


Figure-15
Shows the relationship between Cumulative average abnormal return (CAAR) during the event period (day -20 to +20)



Test of Hypothesis:
H0= there is no difference in abnormal return of merged bank before and after announcement of period.
H1= there is a difference in abnormal return of merged bank before and after announcement of period.
Conclusion: Reject Null Hypothesis, because there is difference in abnormal returns of merged banks before and after announcement period.

Conclusion:

The banking industry has been undergoing major consolidation in recent years, with a number of global players emerging through successive and mergers and acquisitions. This creates a great deal of uncertainty for all stakeholders concerned. This study examines the short run share price performance of selected banks engaged mergers activity. The study finds that, in case of Bank of Baroda, Oriental bank of Commerce and HDFC Bank, market negatively reacted for merger activity and in case of Indian Overseas Bank, Federal Bank, and ICICI Bank, Market has anticipated and positively reacted to the merger activity. Therefore it can conclude that, in a banking environment marked by frequent merger, such transaction directly or indirectly affect the shareholders sentiments and increase the market shares i.e merger enhance the performance and wealth for both businesses and shareholders.

References:

1. Beena P. L. (2000). ‘An analysis of merger in the private corporate sector in India’ Journal of Scientific & Industrial Research, Special Issue on Management, August – Sep., Nasscom, New Delhi. Page No. 34-51
2. 1 Saple V. (2000) “”“Diversification, Mergers and their Effect on Firm Performance: A Study of the Indian Corporate Sector”, Review of Quantitative Finance and Accounting. Page No.67.
3. Huzifa Husain, (2001) ‘Merger and Acquisition unlocking value’ Antitrust Bulletin 37, pp. 541-600.
4. Chitranandi A.K, (2001) “Trumps for M & A – Information Technology Management in a merger and acquisition strategy” International Journal of Management Reviews 9 (2), pp. 141-170.
5. Mansur, A. Mulla, 2003. Forecasting the Viability and Operational Efficiency by use of Ratio Analysis - A Case Study. Finance India, XVII (3): 893-897.
6. Biswas Joydeep,(2004) : Corporate Mergers & Acquisitionsin India Indian Journal of Accounting Vol. XXXV(1), pp.67-72
7. Shrimali Vijay and SaxenaKarunesh, (2004) : Merger & Acquisitions : Indian Journal of Accounting Vol. XXXV(1), pp 48-54
8. Vanitha, S. 2006. Mergers and Acquisitions in the Manufacturing Sector: An Evaluation Study, PhD Dissertation, Bharathidasan University, Tiruchirappalli
9. Vanitha, S. and M. Selvam, 2007. Financial Performance of Indian Manufacturing Companies during Pre and Post Merger. International Research Journal of Finance and Economics, 12:7-35
10. Mantravadi, P. and A. Reddy, (2008). "Relative Size in Mergers and Operating Performance: Indian Experience", Working Paper Series, available at: www.ssrn.com (accessed March 15,2008).
11. Ryo Kawahara and Fumiko Takeda, (2007) ‘M & A and Corporate Performance in Japan’ Journal of Banking and Finance 17, pp. 411-422.
12. David C. Cheng, (2009) ‘Financial determinants of Bank Takeovers’ Journal of Financial Economics 31, pp. 135-175.
13. Kumar, R., (2009). "Post-Merger Corporate Performance: an Indian Perspective", Management Research News 32 (2), pp. 145-157.
14. N. M. Leepsa & Chandra Sekhar Mishra, (2009), “Post Merger Financial Performance: A Study with Reference to Select Manufacturing Companies in India”, International Research Journal of Finance and Economics ISSN 1450- 2887.
15. . Ruhani Ali and Gupta G S (2010) ‘Motivation and Outcomes of Malaysian takeovers: An international perspective’ Antitrust Bulletin 37, pp. 541-600.
16. Jaydev and sensarmq “Mergers in Indian Banking: An Analysis”; South Asian Journal of Management, Oct-De c-2007, Pp.20-49.
17. Gerard T. Olson, Michael S. Pagano
18. Dr. K B Das & CA (Dr) Sanjeev Singhal, “Impact of Reforms on Efficiency of the Commercial Banks in India”, Indian Journal of Accounting, Vol. XLV (1) Dec 2013, Pg no. 32-44.
19. Malabika Deo and Mohammad Aasif Shah. (2011), “Shareholder Wealth Effects to Merger Announcements in Indian it Industry,” International Journal of Research in Commerce, Economics and Management, Vol. 1, No.7, (November), pp. 61-6
20. Manoj Anand and Jagandeep Singh; “ Impact of Merger announcement on Shareholders wealth: Evidence from Indian Commercial Bank; Vikalpa, vol 33 No 1-2008, Pp.35-54
21. Manoj Anand and Jagandeep Singh; “ Impact of Merger announcement on Shareholders wealth: Evidence from Indian Commercial Bank; Vikalpa, vol 33 No 1-2008, Pp.35-54