

## CHAPTER-7

### FINDINGS & CONCLUSION

The current study aims at assessing the economic performance of selected commercial banks of India both in private and in public sector during the period 2000-01 to 2014-15 for a period comprising of 15 years. The selection of banks under consideration of our study has been done meticulously with some background reasoning appended in the study. The measurement of performance has been conducted segregating the entire period of study in to two periods: before merger period and after merger period. The performance of the banks has been judged in view of several statistical tools like ratio analysis, normality test, regression analysis, paired 't' test, Wilcoxon sign rank test, Kolmogorov-Smirnov test, Shapiro-Wilk test, stationery test by ADF method, interview method and finally logit and probit regression method, Reliability statistic (KMO & Bartlett's test) Factors Analysis etc. The novelty of this research study lies in the meticulous combination of secondary data accompanied by field-level primary data based on expert executives' experience based personal opinion pooling all over India. Broadly, appraisal of performance finally arrived at, has been compared with before merger period and after merger period to arrive at a prominent conclusive inference, which are summed-up below:

#### **Based on the Performance of sum selected Indian commercial bank during FY 2000-01 to 2014-15:**

The following findings can be obtained from the analysis of results from individual merged bank:

**7.1:** While considering the case of **Nadungadi vs. Punjab National Bank** merger, the outcomes advocate that the performance of said bank merger has enhanced in after merger period in terms of Credit -Deposit Ratio, Investment- Deposit Ratio, Priority sector advance as percentage to total advance, Interest income as percentage of total income, Interest expenses as percentage total expenses, Spread as percentage to total assets, Operating profit as percentage to average working funds, Net NPA as percentage to net advances, Capital Adequacy Ratio. However, with respect to Deposit per employee, Advance per employee, Non-interest income as percentage of total income, Establishment expense as percentage of total expenses; Other operating expenses as percentage total expense, Interest Income as percentage to average working funds, Non-interest Income as percentage to average working funds, Return on Asset, these ratios show negative trend in post-merger period. Therefore, we infer that there are noteworthy variances between before and after merger period above mentioned financial indicators and majority of the financial indicators (9 out of 17) of merged Punjab National Bank shows noteworthy upward trend in their operational performance during post-merger period.

The outcome 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 effect of M&As (merger and acquisitions) on sample banks' performance, all parameters except Investment-Deposit ratio (IDR), Interest expenses on total expenses (IETE), net NPA on net asset (NNPANA) of the PNB bank during entire sample period 2000-01 to 2014-15 (both pre-merger and post-merger) do not violate the normality assumption. This means that the 14 parameters out of 17, are

normal and usable for paired 't' test for further investigation. The remaining 3 parameters (IDR, IETE and NNPA) will be further tested by using Wilcoxon Signed Ranks Test for checking the significance difference.

Wilcoxon Signed Ranks Test of merged bank of PNB (Punjab National Bank) indicates that Investment –Deposit Ratio measure (IDR) in post-merger period is likely upper than the before merger period and reversely, the Net NPA to net advances (NNPANA) and Interest expenses to total expenses (IETE) positions in post-merger period are likely lesser than the before merger period, Wilcoxon Test Ranks suggest that there is no noteworthy variance between before and after merger period performance on the basis of Investment-Deposit ratio (IDR), Interest expenses on total expenses (IETE), net NPA on net asset (NNPANA) of the merged Punjab National Bank. However, if we compare the individual ratio, we have derived that the post-merger IDR, NNPA performance for all the years have been better than before merger period and reverse has happened in case of IETE ratio.

Paired samples 't' test advocates that there is no noteworthy variance between before and after merger period of Credit-Deposit Ratio (CDR pre & CDR post), pre and post-merger Priority Sector Advance ratio (PSApre & PSApost), pre and post-merger advance per employee (APEpre & APEpost), pre and post-merger interest income as percentage of total income (IITpre & IITpost), pre and post-merger non-interest income as percentage of total income (NIITpre & NIITpost), pre and post-merger establishment expenses as percentage of total expenses (EETEpre & EETEpost), pre and post-merger other operating expenses as percentage of total expenses (OOETEpre & OOETEpost), pre and post-merger interest income as percentage of average working fund (IIAWFpre &

IIAWFpost), pre and post-merger return on total asset (ROApr& ROApr), pre and post-merger capital adequacy ratio (CARpre & CARpost), pre and post-merger non-interest income as percentage of average working fund (NIIAWFpre & NIIAWFpost).

On the contrary, the results of Paired samples 't' test show noteworthy variance between Pre and Post-merger (DPEpre & DPEpost), (STApr & STApr) and (OPAWFpre & OPAWFpost). This shows that the average (means) of the pre and post (DPEpre & DPEpost) ,( STApr & STApr) and (OPAWFpre & OPAWFpost) values are different significantly at 5% level of significance. .

In case of merger Punjab National Bank, the regression result (judging the impact of several financial parameters on profitability) suggests that spread on total assets (STA), capital adequacy ratio (CAR), operating expenses to total expenses (OOETE) and net NPA to net assets (NNPANA) are derived to have statistically noteworthy effect on revenue or profitability (ROA) at 10% or 5% level of significance respectively during post-merger period.

In brief, results in post-merger period are divided into three classes: positive significant impact of STA and CAR on ROA (obtained as was expected), negative significant impact of OOETE and NNPANA on ROA (obtained as were expected), and negative insignificant impact of credit-deposit ratio (CDR) and non-interest income to total income (NIITI) on ROA.

If both before and after merger period are taken together, regression result reveals that three variables credit –deposit ratio(CDR), operating expenses to total expenses (OOETE) and net NPA to net assets (NNPANA) are derived to have statistically

noteworthy adverse effect on profitability (ROA) at 10% or 5% level of significance respectively.

In brief, results in both before and after merger period taken together are divided into three classes: negative significant impact of CDR (obtained contrary to our expectation), NNPANA (obtained as was expected) and NIITI (obtained contrary to our expectation) on profitability (ROA) and the negative insignificant impact of NIITI on ROA and positive insignificant impact of STA and CAR on ROA at 10% or 5% level of significance respectively.

**7. 2:** In case of merger between **Oriental Bank of Commerce vs. Global Trust Bank**, the outcomes advocate that the performance of bank has enhanced in after merger period in terms of Credit -Deposit Ratio (CDR), Priority sector advance (PSA) as percentage to total advance, Deposit per employee (DPE), Advance per employee (APE), Interest income as percentage of total income (IITI), Spread as percentage of total Assets (STA), Return on Assets (ROA), Net NPA as percentage to net advances (NNPANA) and Capital Adequacy Ratio (CAR).

However, with reference to the ratios namely, Investment-Deposit Ratio (IDR), Non-interest income as percentage of total income (NIITI), Interest expenses as percentage of total expenses (IETE), Establishment expenses as percentage of total expenses (EETE), Other operating expenses as percentage of total expenses (OOETE), Interest Income as percentage to average working funds (IIAWF), Non-interest Income as percentage to average working funds (NIIAWF), Operating profit as percentage to average working funds (OPAWF), a negative trend in post-merger period is found. Therefore, we infer that there are noteworthy variances between before and after merger cases for the above-

mentioned financial indicators and majority of the financial pointers (9 out of 17) of merged Oriental Bank of Commerce display significant improvement during post-merger period.

The outcome 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 effect of merger on sample banks' performance, all parameters except Credit-Deposit ratio (CDR), Investment-Deposit ratio (IDR), Other operating expenses to total expenses (OOETE), Non-interest Income to average working funds (NIIAWF) and Operating profit as % to average working funds (OPAWF) of the Oriental Bank of Commerce during entire sample period 2000-01 to 2014-15 (both pre-merger and post-merger) do not violate the normality assumption. This mean that the 12 parameters out of 17, are normal and usable for the paired 't' test for further significant difference. The remaining 5 parameters (CDR, IDR, OOETE, NIIAWF and OPAWF) will be further tested by using Wilcoxon Signed Ranks Test for checking the significance difference.

By using the Wilcoxon Signed Ranks Test of merged OBC (Oriental Bank of Commerce), we observe that all 5 parameters (such as CDR, IDR, OOETE, NIIAWF and OPAWF), the significant level are more than 0.05 (0.068 for CDR and IDR and 0.144 for OOETE, NIIAWF and OPAWF), therefore, the null hypothesis is accepted which specifies that there are no noteworthy variance between before and after merger performance of merged OBC (Oriental Bank of Commerce).

Paired samples 't' test advocates that there is no noteworthy variance in case of before and after merger of Interest expenses as percentage of total expenses ratio (IETEp<sub>re</sub> -

IETEpost), pre and post-merger interest income as percentage of total income ratio (IITIpri & IITIpst), pre and post-merger non-interest income as percentage of total income ratio (NIITIpri & NIITIpst), pre and post-merger return on total asset ratio (ROApri & ROApst), pre and post-merger capital adequacy ratio (CARpri & CARpst), pre and post-merger Net NPA as percentage to net advances ratio (NNPANApri & NNPANApst), pre and post-merger Operating profit as percentage to average working funds ratio (OPAWFpri & OPAWFpst), pre and post-merger Spread as percentage to total assets ratio (STApri – STApst) performance.

On the contrary, the results of Paired samples 't' test show significant (at 5% level of significance) variance between before and after merger of Priority Sector Advance ratio (PSApri & PSApst), Deposit per employee (DPEpri & DPEpst), Advance per employee (APEpri & APEpst) and Establishment expenses as % of total outlays (EETEpri & EETEpst) in post-merger period of merged OBC.

In case of M&As (merger and acquisitions) between Oriental Bank of Commerce vs. Global Trust Bank, the regression result (judging the impact of several financial parameters on profitability) suggests that out of six independent variables, four variables (such as capital adequacy ratio (CAR), Other operating expenses to total expenses (OOETE), Net NPA to net assets (NNPANA) and non-interest income to total income (NIITI) are found to have statistically noteworthy effect on profitability (ROA) respectively. In brief, results in post-merger period are divided into three classes: positive significant impact of OOETE and NNPANA on ROA (contrary to the theoretical prediction), negative significant impact of NIITI and CAR on ROA which are not theoretically true and do not support our theoretical assumption and negative non-

significant impact of CDR on ROA and positive non-significant impact of STA on ROA at 10% or 5% level of significance respectively.

If both before and after -merger period are taken together, regression result reveals that three variables - credit –deposit ratio (CDR), capital adequacy ratio (CAR) and net NPA to net assets (NNPANA) are derived to have statistically noteworthy adverse effect on profitability (ROA) and spread to total asset (STA) and operating expenses to total expenses (OOETE) are found to have statistically positive impact profitability (ROA). In brief, results in both before and after merger period taken together are divided into three classes: negative significant impact of CDR (contrary to the theoretical prediction), CAR (contrary to the theoretical prediction) and NNPANA (obtained as was expected) on ROA, positive significant impact of STA (supports our hypothesis) and OOETE (contrary to our hypothesis) on ROA and negative insignificant impact of NIITI on ROA at 10% or 5% level of significance respectively.

**7. 3:** In case of merger between **IDBI and United Western Bank**, the outcomes advocate that the performance of said bank has been improved in after the merger period in terms of Deposit per employee (DPE), Advance per employee (APE), Interest income as percentage of total income (IITI), Establishment expenses as percentage of total expenses (EETE), Other operating expenses as percentage of total expenses (OOETE), Interest Income as percentage to average working funds (IIAWF), Non-interest Income as percentage to average working funds (NIIAWF), Operating profit as percentage to average working funds (OPAWF), Return on Asset (ROA), Net NPA as percentage to net advances (NNPANA) and Capital Adequacy Ratio (CAR). However, regarding Credit -

Deposit Ratio (CDR), Investment- Deposit Ratio (IDR), Priority sector advance as percentage to total advance (PSA), Non-interest income as percentage of total income (NIITI), Interest expenses as percentage of total expenses (IETE), Spread as percentage to total assets (STA), these ratios show negative trend in post-merger period of IDBI bank. Therefore, we infer that there are noteworthy variances between before and after merger period for the above-mentioned financial indicators and majority of them (11 out of 17) of merged IDBI bank show noteworthy upward trend in their operational performance during post-merger period.

The outcome 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 effect of merger on sample banks' performance, all parameters except credit deposit ratio (CDR), investment-deposit ratio (IDR), deposit per employee (DPE), Other operating expenses as percentage of total expenses (OOETE) and Capital Adequacy Ratio (CAR) of the IDBI bank do not violate the normality assumption. In other word, 12 parameters out of total 17 parameters are normal and usable for pair t test to check further significant impact on merged bank. The remaining 5 parameters (CDR, IDR, DPE, OOETE and CAR) will be further tested by using Wilcoxon Signed Ranks Test for checking the significance difference.

By using the Wilcoxon Signed Ranks Test of merged IDBI bank, we observe that all 5 parameters (such as CDR, IDR, DPE, OOETE and CAR), the significant level are more than 0.05 (i.e. 0.18), therefore, the null hypothesis is accepted which specifies that there are no noteworthy variance between before and after merger performance of merged IDBI bank.

Paired samples 't' test advocates that there is noteworthy variance at 5% level in case of before and after merger of Priority sector advance as percentage to total advance ratio (PSA pre & PSA post) and pre and post-merger spread as percentage to total assets (STApr and STApr).

On the contrary, there are no noteworthy variance between Pre and Post-merger of APE, IITI, NIITI, IETE, EETE, IIAWF, NIIAWF, OPAWF, ROA and NNAPAN. These parameters indicate that the average or means of before and after merger ratio are not altered significantly.

In case of merger between IDBI Bank vs. United Western Bank, the regression result (judging the impact of several financial parameters on profitability) suggests that five variables spread to total asset (STA), credit-deposit ratio (CDR), capital adequacy ratio (CAR), net NPA to net assets (NNAPAN) and non-interest income to total income (NIITI) are derived to have statistically noteworthy effect on profitability (ROA) at 10% or 5% level of significance respectively. In brief, results in post-merger period are divided into three classes: positive significant impact of STA, CDR and CAR on ROA which is theoretically true and sound, negative significant impact of NIITI on ROA (contrary to the theoretical assumption) and NNAPAN on ROA (supports the theoretical assumption) and negative insignificant impact of OEETE on ROA.

If both before and after merger period are taken together, regression result reveals that only one parameter such as credit-deposit ratio (CDR) is found to have statistically noteworthy affirmative effect on profitability (ROA), which supports our theoretical presumption. In brief, results in both before and after merger period taken together are divided into four classes: negative non-significant impact of CAR, OEETE and NIITI on

ROA, positive insignificant impact of STA on ROA and positive significant impact of CDR on ROA (supports the theoretical assumption), negative significant impact of NNPA on ROA at 10% or 5% level of significance respectively.

**7. 4:** Considering the case of **Centurion Bank of Punjab vs. HDFC Bank** merger, the outcomes advocate that the performance of banks has been enhanced in merged HDFC bank in terms of Credit -Deposit Ratio (CDR), Priority sector advance as performance to total advance (PSA), Deposit per employee (DPE), Advance per employee (APE), Interest income as performance of total income (IITI), Other operating expenses as percentage of total expenses (OOETE), Spread as performance to Assets (STA), Interest Income as percentage to average working funds (IIAWF), Non-interest Income as percentage to average working funds (NIIAWF), Operating profit as percentage to average working funds (OPAWF), Return on Asset (ROA), Net NPA as percentage to net advances (NNPANA) and Capital Adequacy Ratio (CAR). However, regarding Investment-Deposit Ratio (IDR), Non-interest income as percentage of total income (NIITI), Interest expenses as percentage of total expenses (IETE) and Establishment expenses as percentage of total expenses (EETE), the results show negative trend in post-merger period of HDFC bank. Hence, we infer that there are noteworthy variances between before and after merger cases for the above stated financial indicators and majority of the financial pointers (12 out of 17) of HDFC Bank show noteworthy improvement in their significant performance during post-merger period.

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 merged HDFC banks' performance, all parameters except Priority sector advance to total advance (PSA), Spread to total Assets (STA), Non-interest Income to average working funds (NIIAWF), Capital Adequacy Ratio (CAR) of the HDFC bank during entire sample period 2000-01 to 2014-15 (both pre-merger and post-merger) do not violate the normality assumption. In other word, 13 parameters out of total 17 parameters are normal and usable for paired't' test to check further significant impact on merged bank. The remaining 4 parameters (such as PSA, STA, NIIAWF and CAR) will be further tested by using Wilcoxon Signed Ranks Test for checking the significance difference.

By using the Wilcoxon Signed Ranks Test of merged HDFC bank, we see that only 2 parameters (such as PSA and STA) the significant level are less than 0.05 (i.e.0.046 and 0.028), therefore, the null hypothesis is rejected, which specifies that there are noteworthy variance between before and after merger performance of merged HDFC bank. The other 2 parameters (such as NIIAWF and CAR) the significant level are more than 0.05 (i.e.0.116 and 0.345), therefore, the null hypothesis is accepted, which specifies that there are no noteworthy variance between before and after merger performance of merged HDFC bank.

Paired samples't' test suggests that there are noteworthy variance at 5% level between the picture of before and after merger period of merged HDFC bank of cash deposit ratio (CDR), Investment-Deposit ratio (IDR), Interest expenses as percentage total expenses (IETE), Establishment expenses as percentage of total expenses (EETE), Other operating expenses to total expenses (OOETE), Interest income to average working fund (IIAWF).

There are no noteworthy variance between before and after merger deposit per employee (DPE), Advance per employee (APE), Interest income to total income (IITI), Non-interest income to total income (NIITI) Operating profit as percentage of average working fund (OPAWF), Return on assets (ROA) and Net NPA to net asset (NNPANA). These parameters indicate that the average or means of the before and after merger values are not different meaningfully.

In case of merger between Centurion Bank of Punjab vs.HDFC Bank, the regression result (judging the impact of several financial parameters on profitability) suggests that four parameters credit–deposit ratio (CDR), capital adequacy ratio (CAR), Other operating expenses to total expenses (OOETE) and net NPA to net assets (NNPANA) are derived to have statistically noteworthy effect on revue or profitability (ROA) at 10% or 5% level of significance respectively. In brief, results in post-merger period are divided into three classes: positive significant impact of CDR and CAR on ROA (supports the theoretical assumption), negative significant impact of OOETE and NNPANA on ROA (theoretically true and supports our hypothesis) and negative insignificant impact of NIITI on ROA and positive insignificant impact of STA on ROA.

If both the before and after merger period taken together, regression result reveals that three variables (STA, CDR and NIITI) are derived to have a statistically noteworthy effect on ROA. In brief, results in both pre and post-merger period taken together are divided into three classes : negative significant impact of STA on ROA and NIITI on ROA (beyond our expectation), negative insignificant impact of CAR, OOETE and NNPANA on ROA and positive significant impact of CDR on ROA at 10% or 5% level of significance respectively (at par our expectation).

**7. 5:** While considering the case of **Bank of Rajasthan (Target Bank) vs. ICICI Bank (Acquiring Bank)** merger, the outcomes advocate that the performance of banks in post-merger period has been enhanced in terms of Credit-Deposit Ratio (CDR), Investment-Deposit Ratio (IDR), Deposit per employee (DPE), Advance per employee (APE), Non-interest income as percentage of total income (NIITI), Interest expenses as percentage of total expenses (IETE), Establishment expenses as percentage of total expenses (EETE), Spread as percentage to total Assets (STA), Interest Income as percentage to average working funds (IIAWF), Non-interest Income as percentage to average working funds (NIIAWF), Operating profit as percentage to average working funds (OPAWF), Return on Asset (ROA), Capital Adequacy Ratio (CAR) and Net NPA as percentage to net advances (NNPANA). However, regarding Priority sector advance as percentage to total advance (PSA), Interest income as percentage of total income (IITI), other operating expenses as percentage of total expenses (OOETE), these ratios show negative trend in post-merger period. Thus, we infer that there are noteworthy variances between before and after merger above mentioned financial indicators and majority of the financial pointers (14 out of 17) of merged ICICI Bank show noteworthy enhancement in their operational performance during post-merger period.

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 merged ICICI banks' performance, all parameters except credit-deposit ratio (CDR), investment deposit ratio (IDR), other operating expenses to total expenses (OOETE), net NPA to net assets (NNPANA) and

Capital Adequacy Ratio (CAR) of the HDFC bank during entire sample period 2000-01 to 2014-15 (both pre-merger and post-merger) do not violate the normality assumption. In other words, 12 parameters out of total 17 parameters are normal and usable for paired 't' test to check further significant impact on merged bank. The remaining 5 parameters (such as CDR, IDR, OOETE, NNANA and CAR) will be further tested by using Wilcoxon Signed Ranks Test for checking the significance difference.

By using the Wilcoxon Signed Ranks Test of merged ICICI bank, we observe that all 5 parameters (such as CDR, IDR, CAR, OOETE and CAR) the significant level are more than 0.05 (i.e.0.715, 0.273, 0.068, 0.068 and 0.068 respectively), therefore, the null hypothesis is accepted, which shows that there are no noteworthy variance between before and after merger performance of merged ICICI bank in respect of these 5 parameters/ratios.

Paired sample 't' test suggests that there are noteworthy variance at 5% level between the picture of before and after merger period of merged ICICI bank of Priority Sector Advance (PSA), Establishment expenses as percentage of total expenses (EETE), Spread as percentage of total advance (STA), Operating profit as percentage to average working fund (OPAWF), Return on Assets (ROA), Advance per employee (APE).

In case of merger between Bank of Rajasthan (Target Bank) and ICICI Bank (Acquiring Bank), the regression result (judging the impact of several financial parameters on profitability) suggests that four variables- spread to total asset (STA), credit-deposit ratio (CDR), other operating expenses to total expenses (OOETE) and non-interest income to total income (NIITI) are derived to have statistically noteworthy effect on profitability (ROA) at 10% or 5% level of significance respectively. In brief,

results in post-merger period are divided into three categories: positive significant impact of STA and CDR on ROA (at par with our expected assumption), negative significant impact of OOETE on ROA (obtained as was expected) and negative significant impact of NIITI on ROA (contrary to our expectation) and negative insignificant impact of NNPANA on ROA and positive insignificant impact of CAR on ROA at 10% or 5% level of significance respectively.

If both the before or after merger period taken together, regression result reveals that two parameters spread to total asset (STA) and non-interest income to total income (NIITI) are derived to have a statistically noteworthy positive effect on profitability (ROA) and one parameter Capital Adequacy Ratio (CAR) has noteworthy adverse effect on ROA respectively. In brief, results in both before and after merger period taken together are divided into three classes: negative significant impact of CAR on ROA (beyond expectation), positive significant impact of STA and NIITI on ROA (at par with our expected assumption) and positive insignificant impact of CDR and OOETE on ROA.

**7. 6: Consolidated findings on all 5 merged banks based on the mean difference of 17 parameters:**

- (i) 2 parameters (such as NNPANA & CAR) are really impressive on post-merger period.
- (ii) 7 parameters (such as CDR, DPE, APE, IITI, STA, OPAWF and ROA) are very significant on post-merger period.
- (iii) Impact of 2 parameters (PSA and IIAWF) are good on post-merger period

- (iv) 5 parameters (such as IDR, IETE, EETE, OOETE & NIIAWF) does not have any noteworthy effect on post-merger and NIITI as well.
- (v) An aggregate of 55 (9+9+11+12+14) parameters out of total of 85 parameters of all 5 merged banks have positive significant impact and the remaining 30 (8+8+6+5+3) parameters does not show any noteworthy effect on merged banks. Therefore, we conclude from the above results that any bank merger may have positive impact in post-merger period of merged bank.

We observe that the impact of all 5 merged bank based on the following measurement quality and efficiency aspect are classified in five heads:

**7. 6 (a): Assets quality:** Most of the parameters indicating assets quality like CDR, NNPANA present positive trend towards their performance evaluation. Based on the econometric model (Paired t test), overall assets quality represented by CDR, IDR & PSA is showing significant positive differences in post-merger period.

**7. 6 (b): Operational efficiency:** With respect to operational efficiency in term of performance evaluation, all the parameters like IETE, EETE & OOETE display dismal declining trend. Based on the econometric model (Paired t test), operational efficiency represented by IETE, EETE & OOETE is showing statistically significant positive differences during post-merger period indicating that merger enhances operational inefficiency because of increasing expenditure.

**7. 6 (c): Management efficiency:** While considering Management efficiency with respect to DPE & APE, these two-ratio show very strong positive performance that are under our general expectation. Based on the econometric model (Paired t test),

management efficiency represented by DPE & APE is showing significant positive differences in post-merger period.

**7. 6 (d): Earning quality:** With respect to earning quality represented by STA, IIAWF, NIIAWF, OPAWF, ROA, IITI & NIITI, it has found that all financial parameters have presented favorable picture within our expectation expect NIIAWF & NIITI. Based on the econometric model (Paired t test), earning quality represented by STA, OPAWF, IIAWF and ROA are showing significant positive (improved) differences in post-merger period.

**7. 6. (e): Capital adequacy:** Capital adequacy ratio is found to have steady favorable pictures during post-merger scenario, which indicate presence of additional capital to bear additional risk and resources available for growth of merged bank.

**7. 7: Regression analysis of both pre and post-merger period (both banks) and post-merger period of merged bank:**

**STA:** During post-merger period, STA has influenced positively on ROA in majority of merger (PNB, IDBI & ICICI), which corroborated our results with same financial parameter.

**CDR:** In post-merger period, CDR has impacted on positive on ROA which also support our arithmetic inference

**CAR:** During post-merger period, in most of the merger cases, CAR influenced positively on ROA which support our arithmetical inference.

**OOETE:** In majority of merger, OOETE has influenced negatively, which has reversely influenced ROA (except OBC) as per our arithmetical inference.

**NNPANA:** It has reversed impact on ROA. In most of the cases, NNPANA has influenced negatively, which has positively influenced ROA as per our arithmetical inference.

**NIITI:** In majority of merger, NIITI has influenced negatively on ROA indicating that with the decrease in NIITI (already shown in financial parameter analysis), ROA increases. This result is beyond our expectation and contrary to our explanation.

### **7.8: Findings based on executives (Primary) survey on merger of Indian commercial banks:**

This experimental research based on managers' review observe that new geographical area (NGA), cost advantage (CA), size advantage (SA), customer base (CB), inorganic growth (IG), HR integration (HRI), shareholders' value (SV), brand quality (BE), financial inclusion (FI), technological advantage (TA), compliance with more regulations (CWR), corporate governance (CG), risk perception (RP), corporate social responsibility (CSR), Non-Performing Assets (NPA) are treated as the vital strategic motives behind merger of Indian commercial banks. While bearing in mind those factors in order to magnitude of computed mean as our experimental outcome endorses based on executives 'study. Rating on perception of executives based on combined average suggests that around 72% of the executives are in favour of merger of the said banks posing favorable opinion (excellent either 20% or good 52%) which indicates that factors undertaken will create positive effect on merger of banks.

Having pooled opinion of several executives who pose their well-thought judgment, factor analysis suggests that there are several factors affecting the merger issues of banks in India like inorganic growth, corporate governance, shareholders value, non-performing

assets, size advantage, financial inclusion etc. These factors respectively carry the highest factors loading which means these six factors are most important while executives are posing opinion regarding merger issues of banks in Indian perspective. The ordinal logit model shows that most of the executives contemplate that CG (corporate governance), in particular, has an important and noteworthy impact on the decision of M&As of Indian commercial banks. Other notable factors like inorganic growth (IG), Shareholders value (SV), Non- performing assets (NPA), size advantage (SA) and financial inclusion (FI) are not so important factors in deciding merger decision of Indian banks as our ordinal regression results suggest.

#### **7.9: Limitations and future research direction of the Study:**

The present study has a number of limitations that should be acknowledged. The study is basically limited small number of executives scattered in different parts of India for a shorter period. The data collection was based on the opinion of the respondents and opinion of a human being may change with the change of time. The data collection are primary in nature, therefore it suffers from the limitations of primary data. Some executives were reluctant in answering the questions. The sample size is very limited due to time constraint. Therefore, sample size may not be precisely practicable for the large population of the country. It is true that M&As (mergers and acquisitions) in banking sector is an enduring activity in the world of business, where feeble banks should be consolidated with strong banks to safeguard the demand and privileges on the part of customers and other stakeholders and hence, merging banks and merged banks generates synergy, and at the same time customers may be benefited as a results of consolidation. When a merger takes place one firm has to water down itself into another firm, but it is

not just the transfer of assets and liabilities but the lives of respective employees are also associated with it. However, in this study, we ignore the fact of the employees who are not having contentment in the transferee bank, rather causing considerable trauma for employees and managers of both the merging and merged banks that result in attitudinal and efficiency problems as well as turnover of valued employees.

In conclusion, this study contributes and will provide meaningful insights to academia by providing a theoretical framework to understand executives' perception regarding merger issues of banks in India as well as abroad.

**7.10: Merger in India's banking industry** has provided substantiation that it is the constructive tool for survival of feeble banks by merging into larger bank. Mergers assists banks to reinforce their economic base, get exemption from tax and have direct exposure to cash resources. Results suggest that after the merger, the efficiency and performance of banks have increased in view of several economic parameters and the success of merger is reliant upon synergy gains created during post-merger period and overall performance of bank. While dealing with mergers and acquisitions, synergy can be generated in long run with the cautious usage of the resources, exact valuation of the target and estimating the future prospects. The triumph of mergers and acquisition deals depends upon on post-merger integration process, timely action and to keep check on the costs of integration process. Policies regarding mergers should be made in such a way so that it controls monopoly and anti-competitive practices in banking sector of India. Most of the merger in Indian banking segment has so far taken place to restructure financially fragile banks with strong banks. However, this may have unfavorable influence upon the asset quality of the stronger banks. It is, therefore, recommended that the strong banks should be

merged with stronger banks to compete with foreign banks as well as to penetrate in the global financial market. Therefore, government and policy makers should be more vigilant in advocating merger as a way to garner economies of scale and scope. In the light of the present empirical findings, the future reforms in the banking sector should be directed towards strengthening competitive and market-oriented policies.