EFFECT OF MERGER OF STATE BANK OF INDIA AND ITS ASSOCIATES IN 2017 – A PRE-POST ANALYSIS

Thesis
Submitted to the University of Calicut
for the award of degree of
Doctor of Philosophy in Commerce

By

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DECLARATION

I hereby declare that the thesis entitled **Effect of Merger of State Bank of India and its Associates in 2017- A Pre-Post Analysis** submitted to the University of Calicut for the award of Degree of Doctor of Philosophy in Commerce under the guidance and supervision of Dr. Sreesha C H, is a record of bonafide research work done by me and no part of the thesis has been presented for the award of any degree, diploma, fellowship, or other similar title or recognition of any University/Institution before.

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CERTIFICATE

This is to certify that the thesis entitled **Effect of Merger of State Bank of India and its Associates in 2017- A Pre-Post Analysis** done by Ms. FOUSIYA M. P., for the award of the Degree of Doctor of Philosophy in Commerce of the University of Calicut is a record of bonafide research work carried out under my supervision and guidance. No part of the thesis has been submitted for any degree, diploma, fellowship or other similar title of this or any other Institute or University. She is permitted to submit the thesis.

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FOUSIYA M. P.

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LIST OF ABBREVIATIONS

AR	-	Abnormal Return
BHAR	-	Buy and Hold Abnormal Return
BMB	-	Bharatiya Mahila Bank
CAPM	-	Capital Asset Pricing Model
CAAR	-	Cumulative Average Abnormal Return
CAR	-	Capital Adequacy Ratio
CAR	-	Cumulative Abnormal Return
DEA	-	Data Envelopment Analysis
DMUs	-	Decision Making Units
DPS	-	Dividend per Share
EPS	-	Earning per Share
M & As	-	Mergers and Acquisitions
NPA	-	Non- Performing Asset
PMI	-	Post Merger Integration
PSBs	-	Public Sector Banks
PTE	-	Pure Technical Efficiency
PVBs	-	Private Sector Banks
RBI	-	Reserve Bank of India

ROA	-	Return on Asset
ROE	-	Return on Equity
SBBJ	-	State Bank of Bikaner and Jaipur
SBH	-	State Bank of Hyderabad
SBI	-	State Bank of India
SBM	-	State Bank of Mysore
SBP	-	State Bank of Patiala
SBT	-	State Bank of Travancore
SE	-	Scale Efficiency
TE	-	Technical Efficiency

Effect of Merger of State Bank of India and its Associates in 2017- A pre- post Analysis

Fousiya M. P.

ABSTRACT

Mergers and acquisitions are inevitable for corporations to pursue when they want to restructure their business and become more competitive. The consolidation of banks through mergers and acquisitions constitutes an important outcome of the financial transformation process and contemporary trend in the Indian banking sector. SBI, India's largest public sector bank merged with its 5 associate banks and Bhartiya Mahila Bank on 1st April 2017. It is expected that with the merger SBI will enter in to the top 50 global banks in context of assets to compete in worldwide financial market. The stakeholders are eagerly looking for the result of the merger. They want to know whether merger achieved its predetermined objectives. The objectives of the study are to analyse the effect of SBI merger on the financial performance, operational efficiency, shareholders' wealth in short& long term and its implications on employees.

The study is descriptive in nature and used both primary and secondary data for analysis. The primary data has been collected from the SBI employees in Kerala who has been experienced the merger. Multi stage random sampling is used for selection of sample. Data collected from 325 SBI employees in Kerala by using structured questionnaire. The secondary data needed for the analysis has been taken from the annual reports of SBI and NSE website during the period 2012-13 to 2021-22. The CAMELS model is used to analyse the effect of SBI merger on the financial performance. The DEA analysis is used to know the effect on operational efficiency. The Event study methodology is used to analyse the effect of merger on shareholders' wealth.

The study found that the financial performance of SBI have a significant effect due to merger. The bank could increase its financial performance in terms of capital adequacy, asset quality, management efficiency, earning quality, liquidity, and sensitivity to market risk to a large extent. The result of DEA analysis shows the efficiency of SBI in reducing its operating& interest expenses to achieve the desired level of output has increased. Whereas the efficiency to reach at optimum scale of operation is comparatively low in post- merger period. The merger did not contribute any significant change in shareholders' wealth either in short run or long run. The employees did not have much apprehension about the effect of merger before and after the merger. At the same time, when taking the data collected from employees coming from former SBT alone, they had a lot of apprehension regarding the change in status, power, and organisational culture. Most of the employees have the concern regarding shortage of staffs in branches after the merger. Whereas employees have positive opinion regarding the implications of the merger to the bank. Now as per Forbes ranking, the position of SBI among global bank is 56 in terms of total assets.

The study concludes that the SBI merger could achieve its predetermined objectives to a great extent, as it is a long vision endeavour, the stakeholders may expect a paradigm shift in the position of SBI among global banks in long run

Key words: Bank Mergers& Acquisition, SBI merger, Financial performance, Operational efficiency, NPA, Shareholders' wealth, Employees apprehension& perceptions.

2017 -ലെ സ്റ്റേറ്റ് ബാങ്ക് ഓഫ് ഇന്ത്യയുടെയും അനുബന്ധസ്ഥാപനങ്ങളുടെയും ലയനത്തിന്റെ അനന്തരഫലം - ഒരു പൂർവ്വോത്തരകാല വിശകലനം

ഫൗസിയ എം.പി.

സംഗ്രഹം

കോർപ്പറേഷനുകൾക്ക് അവരുടെ ബിസിനസ്സ് പുനഃക്രമീകരിക്കാനും കൂടുതൽ മത്സരാധിഷ്ഠിതമാകാനും ലയനങ്ങളും ഏറ്റെടുക്കലുകളും അനിവാര്യമാണ്. ലയനങ്ങളിലൂടെയും ഏറ്റെടുക്കലുകളിലൂടെയും ബാങ്കുകളുടെ ഏകീകരണം ഇന്ത്യൻ ബാങ്കിംഗ് മേഖലയിലെ സാമ്പത്തിക പരിവർത്തന പ്രക്രിയയുടെയും സമകാലിക പ്രവണതയുടെയും ഒരു പ്രധാന ഫലമാണ്. ഇന്ത്യയിലെ ഏറ്റവും വലിയ പൊതുമേഖലാ ബാങ്കായ എസ്ബിഐ അതിന്റെ 5 അനുബന്ധ ബാങ്കുകളുമായും ഭാരതീയ മഹിളാ ബാങ്കുമായും 2017 ഏപ്രിൽ 1-ന് ലയിച്ചു. ലോകമെമ്പാടുമുള്ള സാമ്പത്തിക വിപണിയിൽ മത്സരിക്കുന്നതിന് ആസ്തിയുടെ പശ്ചാത്തലത്തിൽ എസ്ബിഐ ഏറ്റവും മികച്ച 50 ആഗോള ബാങ്കുകളിലേക്ക് പ്രവേശിക്കുമെന്ന് പ്രതീക്ഷിക്കുന്നു. ലയനത്തിന്റെ ഫലം ആകാംക്ഷയോടെയാണ് തല്പരകക്ഷികൾ ഉറ്റുനോക്കുന്നത്. ലയനം അതിന്റെ മുൻകൂട്ടി നിശ്ചയിച്ച ലക്ഷ്യങ്ങൾ നേടിയോ എന്നറിയാൻ അവർ ആഗ്രഹിക്കുന്നു. എസ്ബിഐ ലയനത്തിന്റെ സാമ്പത്തിക പ്രകടനം, പ്രവർത്തന കാര്യക്ഷമത, ഹ്രസ്വവും ദീർഘകാലവുമായ ഓഹരി ഉടമകളുടെ സമ്പത്ത്, ജീവനക്കാരിൽ അതിന്റെ പ്രത്യാഘാതങ്ങൾ എന്നിവ വിശകലനം ചെയ്യുക എന്നതാണ് പഠനത്തിന്റെ ലക്ഷ്യങ്ങൾ.

പഠനം വിവരണാത്മകമാണ് കൂടാതെ പ്രാഥമികവും ദ്വിതീയവുമായ ഡാറ്റ വിശകലനത്തിനായി ഉപയോഗിക്കുന്നു. ലയനം അനുഭവിച്ച കേരളത്തിലെ എസ്ബിഐ ജീവനക്കാരിൽ നിന്നാണ് പ്രാഥമിക വിവരങ്ങൾ ശേഖരിച്ചത്. സാമ്പിൾ തിരഞ്ഞെടുക്കുന്നതിന് മൾട്ടി-സ്റ്റേജ് റാൻഡം സാമ്പിൾ ഉപയോഗിക്കുന്നു. ഘടനാപരമായ ചോദ്യാവലി ഉപയോഗിച്ച് കേരളത്തിലെ 325 എസ്ബിഐ ജീവനക്കാരിൽ നിന്ന് വിവരങ്ങൾ ശേഖരിച്ചു. വിശകലനത്തിന് ആവശ്യമായ ദ്വിതീയ ഡാറ്റ 2012-13 മുതൽ 2021-22 വരെയുള്ള കാലയളവിൽ എസ്ബിഐയുടെയും എൻഎസ്ഇ വെബ്സൈറ്റിന്റെയും വാർഷിക റിപ്പോർട്ടുകളിൽ നിന്ന് എടുത്തതാണ്. എസ്ബിഐ ലയനത്തിന്റെ സാമ്പത്തിക പ്രകടനത്തിന്റെ സ്വാധീനം വിശകലനം ചെയ്യാൻ കാമൽസ് മോഡൽ ഉപയോഗിക്കുന്നു. പ്രവർത്തന കാര്യക്ഷമതയിൽ സ്വാധീനം അറിയാൻ ഡി.ഇ.എ. വിശകലനം ഉപയോഗിക്കുന്നു. ഷെയർഹോൾഡർമാരുടെ സമ്പത്തിൽ ലയനത്തിന്റെ സ്വാധീനം വിശകലനം ചെയ്യാൻ ഇവന്റ് സ്റ്റഡി മെത്തഡോളജി ഉപയോഗിക്കുന്നു.

ലയനം മൂലം എസ്ബിഐയുടെ സാമ്പത്തിക പ്രകടനത്തിൽ കാര്യമായ സ്വാധീനമുണ്ടെന്ന് പഠനം കണ്ടെത്തി. മൂലധന പര്യാപ്തത, ആസ്തി ഗുണനിലവാരം, മാനേജ്മെന്റ് കാര്യക്ഷമത, വരുമാനത്തിന്റെ ഗുണനിലവാരം, പണലഭ്യത, വിപണി അപകടസാധ്യതയോടുള്ള സംവേദനക്ഷമത എന്നിവയിൽ ബാങ്കിന് അതിന്റെ സാമ്പത്തിക പ്രകടനം വർദ്ധിപ്പിക്കാൻ കഴിഞ്ഞു. ഡിഇഎ വിശകലനത്തിന്റെ ഫലം കാണിക്കുന്നത് എസ്ബിഐയുടെ പ്രവർത്തനക്ഷമതയും പലിശച്ചെലവും കുറയ്ക്കുന്നതിലെ കാര്യക്ഷമതയാണ്. ലയനാനന്തര

കാലഘട്ടത്തിൽ പ്രവർത്തനത്തിന്റെ ഒപ്റ്റിമൽ സ്കെയിലിൽ എത്താനുള്ള കാര്യക്ഷമത താരതമ്യേന കുറവാണ്. ലയനം ഹ്രസ്വകാലമായോ ദീർഘകാലാടിസ്ഥാനത്തിലോ ഓഹരി ഉടമകളുടെ സമ്പത്തിൽ കാര്യമായ മാറ്റമൊന്നും വരുത്തിയില്ല. ലയനത്തിന് മുമ്പും ശേഷവും ലയനത്തിന്റെ ഫലത്തെക്കുറിച്ച് ജീവനക്കാർക്ക് വലിയ ആശങ്കയുണ്ടായിരുന്നില്ല. അതേസമയം, മുൻ എസ്ബിടിയിൽ നിന്ന് മാത്രം വരുന്ന ജീവനക്കാരിൽ നിന്ന് ശേഖരിച്ച ഡാറ്റ എടുക്കുമ്പോൾ, പദവി, അധികാരം, സംഘടനാ സംസ്കാരം എന്നിവയിലെ മാറ്റത്തെക്കുറിച്ച് അവർക്ക് വളരെയധികം ആശങ്കയുണ്ടായിരുന്നു. ലയനത്തിനുശേഷം ശാഖകളിൽ ജീവനക്കാരുടെ കുറവു സംബന്ധിച്ച ആശങ്ക മിക്ക ജീവനക്കാർക്കും ഉണ്ട്. അതേസമയം ബാങ്കുമായുള്ള ലയനത്തിന്റെ അനന്തരഫലങ്ങളെക്കുറിച്ച് ജീവനക്കാർക്ക് നല്ല അഭിപ്രായമുണ്ട്. ഇപ്പോൾ ഫോബ്സ് റാങ്കിംഗ് അനുസരിച്ച്, മൊത്തം ആസ്തിയുടെ അടിസ്ഥാനത്തിൽ ആഗോള ബാങ്കിൽ എസ്ബിഐയുടെ സ്ഥാനം 56 ആണ്.

എസ്ബിഐ ലയനത്തിന് അതിന്റെ മുൻകൂട്ടി നിശ്ചയിച്ച ലക്ഷ്യങ്ങൾ ഒരു പരിധി വരെ കൈവരിക്കാൻ കഴിയുമെന്ന് പഠനം നിഗമനം ചെയ്യുന്നു, ഇത് ഒരു ദീർഘ വീക്ഷണ ശ്രമമായതിനാൽ, ദീർഘകാലാടിസ്ഥാനത്തിൽ ആഗോള ബാങ്കുകൾക്കിടയിൽ എസ്ബിഐയുടെ സ്ഥാനത്ത് ഒരു മാതൃകാപരമായ മാറ്റം ഓഹരി ഉടമകൾ പ്രതീക്ഷിക്കുന്നു.

താക്കോൽവാക്കുകൾ: ബാങ്ക് ലയനങ്ങളും ഏറ്റെടുക്കലും, എസ്ബിഐ ലയനം, സാമ്പത്തിക പ്രകടനം, പ്രവർത്തനക്ഷമത, പ്രവർത്തനരഹിതമായ ആസ്തി, ഓഹരി ഉടമകളുടെ സമ്പത്ത്, ജീവനക്കാരുടെ ആശങ്കയും ധാരണകളും.

CHAPTER 1

INTRODUCTION

1.1 Background of the study

Globalisation becomes a critical component for economic development of countries (Banakar et al., 2018). Financial institutions have become more consolidated due to globalization. (Pushkin & Aref, 2004). As a result of upgrading their financial organizations, many countries are looking to strengthen their competitive positions in the economic global market. For large financial service firms to succeed on the global economic market, they often merge with other financial institutions (Berger et al., 1999). In order to thrive, companies must grow rapidly, act efficiently and effectively, be profitable and take a leading position in the global market place. Due to this, mergers and acquisitions are inevitable for corporations to pursue when they want to restructure their business and become more competitive (Shaomeng, 2015).

The banks and financial institutions are core component of any financial system. In India, the banking sector is a key part of the economy, and it is sound, well capitalized, and regulated (Kuriakose & Paul, 2016). As per the RBI, India's banking sector is sufficiently capitalised and well- regulated. The country's financial and economic conditions are far superior to any other country in the world. According to credit, market and liquidity risk studies, Indian banks are generally resilient and have weathered the global downturn well. The Indian banking system consists of 12 public sector banks, 21 private sector banks, 44 foreign banks, 43 regional rural banks, 1,484 urban cooperative banks and 96,000 rural cooperative banks in addition to cooperative credit institutions. As of September 2022, the total number of ATMs in India reached 217,308 out of which 49.81% are in rural and semi urban areas (*IBEF*, 2022).

The consolidation of banks through mergers and acquisitions constitutes an important outcome of the financial transformation process and a contemporary trend in the Indian banking sector (Kuriakose & Paul, 2016).

SBI being the largest and oldest bank in India, had undertaken a number of acquisitions from time to time. Its origins can be traced back to British India, when Bank of Bengal, Bank of Madras and Bank of Bombay merged to form Imperial Bank of India in 1921, which became the State Bank of India in 1955. The merger of SBI with its associates began fourteen years ago when SBI merged State Bank of Saurashtra with itself in 2008. In 2010, State Bank of Indore was also merged with the larger bank. SBI has since made repeated attempts to merge its units but none came to fruition due to a shortage of capital("Cabinet Approves Merger of Associates with State Bank - The Hindu," 2016).

State Bank of India former chairman Arundhati Bhattacharya told Economic Times "We have now entered the last lap, Merger will create a stronger, more efficient (and) vibrant entity. Date (of the merger) will be as per (government) notification."

According to a statement made by the government that left open the prospect of additional consolidations, the SBI-associate merger is a significant step towards improving the banking industry through the consolidation of public sector banks. "It is in pursuance of the Indradhanush action plan of the government (to revamp functioning of state-run banks) and it is expected to strengthen the banking sector and improve its efficiency and profitability,"(*SBI Merger: Government Gives Green Signal to Merger of SBI and Its Five Associate Banks*, 2017).

In a gazette notification dated 22 February 2017, the government said that "1 April will be the record date for the merger of State Bank of India (SBI) with five of its associate banks, all shares of these associate banks would cease to exist as individual entities and would stand transferred to SBI. After the merger, SBI is set to be among the top 50 large banks of the world. SBI was ranked 52 in the world in terms of assets in 2015, according to Bloomberg, and a merger will see it break into the top 50".(Nair, 2017).

While briefing during a Cabinet meeting, former FM Arun Jaitley stated: "This merger will lead to far greater operational efficiency, there will be synergy in operations within these banks, which will also cut down the cost of operations and thus cost of funds.” (*SBI Merger: Government Gives Green Signal to Merger of SBI and Its Five Associate Banks*, 2017).

With effect from April 1, State Bank of Bikaner and Jaipur (SBBJ), State Bank of Hyderabad (SBH), State Bank of Mysore (SBM), State Bank of Patiala (SBP) and State Bank of Travancore (SBT), besides Bharatiya Mahila Bank (BMB), merged with SBI, catapulting the country’s largest lender to among the top 50 banks in the world (*Five Associate Banks, BMB Merge with SBI - The Hindu*, 2017). It is considered as the ever-largest merger in Indian banking sector. This merger is considered as the mile stone of Indian banking history. The merger aimed at making bigger, better and stronger new SBI and to reach at the league of global banks.

The former Chairman of SBI Arundhati Bhattacharya Said in a statement, “The merger of SBI and its associate banks is a win- win for both”, “While the network of SBI would stand to increase, its reach would multiply.” She said the bank expected efficiencies to be created from rationalisation of branches, common treasury pooling and proper deployment of a large skilled resource base (“Cabinet Approves Merger of associates with State Bank - The Hindu,” 2016). According to Bhattacharya, following the merger, SBI might move into the ranks of the top 50 banks globally. “Currently, no Indian bank features in the top 50 banks of the world. With this merger, some visibility at global level is likely to increase,”(“SBI Set to Merge with Its Five Arms, Mahila Bank This Fisca - Times of India,” 2016).

Ms. Bhattacharya said that customers of associates and subsidiaries would also be beneficiaries. “Any introduction of new technology by SBI would simultaneously be available uniformly. The scale of operations and common cost would get rationalised. Overall, the synergies being pooled at one place are going to be a big positive,”(“Cabinet Approves Merger of Associates with State Bank-TheHindu,”2016). Being the largest merger, the stakeholders including shareholders, employees, government, and general public are eagerly looking for the effect of this strategic move. They are seeking information about how far the bank succeeded to attain the predetermined objectives of merger.

1.2 Statement of the Problem

Most often, globally companies were undergone mergers& acquisitions for development, some firms succeeded while others failed. The success depends on a number of factors. In order to be a successful merger, companies have to gain knowledge and expertise in consolidation. Understanding the factor that has a positive impact on the company's performance is the crucial step in M& As. The merger of public sector giant SBI and its associates has been a giant leap as far as Indian Banking Sector is concerned. It is considered as the biggest consolidation in the history of merger and acquisition in banking sector. The merger of SBI and five associate banks and BMB took place in 2017 April 1, with the promise by the ministry and the management of bigger, better, stronger new SBI. SBI, with its renewed vision of becoming the bank of choice for Transforming India and its mission to remain committed to providing simple, responsive and innovative financial solutions and adhering to values of service, transparency, ethics, politeness and sustainability will have to perform its expected role with the involvement and support of all its stakeholders. The stakeholders are eagerly looking for the result of the merger. They want to know whether merger achieved its predetermined objectives.

One of the principal objectives behind the merger is to reap the benefits of economies of scale. Moreover, merger will shift SBI to the list of universal banks in terms of total assets, products and geographical diversification. Large banks are in a better position to introduce technology, high level of performance in terms of profitability and productivity and reduced cost than small banks. Rather than any profit motive aim, meeting the cut throat competition prevailing in the market is another agenda behind merger and acquisition. Hence in this context, a detailed research to measure the effect of merger on performance of bidder bank should be analysed with the help of pre-merger and post-merger financial data released by the bidder bank. One of the objectives of merger was better scale efficiency hence, it is highly imperative to know the changes in the scale efficiency of SBI before and after the merger. This merger was a giant leap in the Indian economy, surely it will affect the share market positively or negatively, therefore a study is needed to analyse the effect of merger on the shareholders wealth. Increased level of nonperforming asset is the major challenge that many of banks are facing in the present scenario. Hence the effect of merger on level of NPA should also be analyzed. Even though the government have brought this idea with much expectation, we could witness opposition and strikes from the side of employees especially employees of target banks towards merger. Hence the perception and apprehensions of employees when they heard about the merger and the implication of merger should also be checked.

Therefore, this study tries to find out answers for these questions;

- Does SBI merger improve financial performance of merged entity?
- How much does it contribute in the reduction of Non- performing Asset?
- Does merger improve the operational efficiency of bank?
- Does the merger create value to the shareholders during the announcement period of merger and in long run?
- What are the apprehensions of employees towards merger in pre-& post- merger period?
- Whether any changes in the apprehensions of employees in pre- &post- merger period?
- Is there any difference in the apprehension of bidder and target bank employees towards merger?
- How far does the merger of SBI & its associates succeeded in achieving its predetermined objectives?

1.3 Objectives of the study

Following are the important objectives set for the study:

1. To identify the effect of the merger of SBI and its associates on financial performance of bidder bank.

2. To examine the effect of merger of SBI on level of Non-Performing Assets (NPA) of bidder bank.

3. To measure the effect of merger of SBI on operational efficiency of bidder bank.

4. To measure the long-term and short-term effect of the merger of SBI and its associates on shareholders' wealth.

5. To find out the apprehensions of employees towards the implications of the merger and compare the bidder and target bank employees during pre and post-merger period.

1.4 Significance of the study

On 1st April 2017, State Bank of India, which is India's largest Bank merged five associate banks and Bharatiya Mahila Bank with itself. This is the first ever large-scale consolidation in the Indian Banking industry. With the merger SBI entered the league of top 50 global banks. In this context the study on the effect of merger on financial performance and operational efficiency of SBI have great significance. With the merger there will be effect on the shareholders' value, that changes needs to be addressed. The non-performing assets are problematic for banks, one of the objectives of merger is to reduce the level of NPA, through the merger the level of nonperforming assets will change, that change also needs to be studied. The employees are the key factor in every industry, they are the part and parcel of the smooth and efficient running of bank, so the human factor should be addressed. While an organisational change, the employees will affect it and they respond to it oppositely. In this case of merger of SBI, we witnessed the strikes and voluntary retirements from the part of employees, though a study is highly significant to address their problems regarding merger. Though the study entitled ***Effect of Merger of State Bank of India and its Associates in 2017- A Pre- Post Analysis*** is a contemporary topic which needs to be discussed.

1.5 Scope of the Study

This thesis is built within the following boundaries and scope;

This study is descriptive in nature and it will provide a macro view on SBI merger with its associates.

1. The scope of the data used in the study includes secondary and primary data. For the secondary data analysis, four data sets have been used. First data set consists of SBI annual reports for last 9 years (from 2013-14 to 2021-22) for analysing effects of merger on financial performance and on NPA. The second data set consists of data for analysing operational efficiency during the period 2012-13 to 2021 to 22.

   The third data set contains share price of SBI and NSE indices for analysing short term shareholders effect during the period of 1st January 2016 to 10th April 2017.

   The fourth data set consists of data for analysing effect of merger on shareholders' wealth in long term during the period of 01-04-2012 to 30- 03-2022.

2. For the purpose of primary data, employees from selected SBI branches in Kerala considered. Only former SBT employees are considered for the sample from target banks.

3. The scope of the topic covered for the study comprises the merger and acquisition of SBI with its associates and BMB, effect of merger on financial performance and operational efficiency of bidder bank, on level of NPA, effect on shareholder's wealth, and effect on employees.

Hence, the study has conducted as a case study of effect of merger of SBI with its associates on financial performance, operational efficiency, NPA, shareholder's wealth and employees.

1.6 Variables for the study

The study seeks to answer the important research questions, *Whether the mega merger achieve its objectives in terms of financial performance, operational efficiency,* *shareholder's wealth, reduction in NPA and also checks the apprehension and perception of employees?*

Following list of variables are used for fulfilling these objectives.

Table 1.1

Variables used for the study

Objective	Variables used	Sub variables
Financial performance	CAMELS variables-four years pre- merger and four years post-merger data from the annual reports of SBI (from 2013-14 to 2021-22)	
	1. Capital Adequacy	• Capital Adequacy Ratio • Debt- equity Ratio • Total Advance to Total Asset Ratio • Government Securities to Total Investment Ratio
	2. Asset Quality	• Net NPA to Net Advance Ratio • Gross NPA to Net Advance Ratio • Total Investment to Total Assets Ratio
	3. Management Efficiency	• Total Expenditure to Total Income Ratio • Total Advances to Total Deposit Ratio • Total Income to Total Assets • Profit Per Employee • Business Per Employee
	4. Earning Quality	• Dividend Pay- out Ratio • Return to Asset • Return on Equity

Objective	Variables used	Sub variables
	5. Liquidity 6. Sensitivity	• Spread to Total Asset • Interest Income to Total Income • Non- Interest Income to Total Income • Cash to Deposit Ratio • Govt. Securities to Total Assets Ratio • Total Investment to Total Deposit Ratio • Liquid Assets to Total Assets Ratio • Liquid Assets to Deposit Ratio • Price Earnings Ratio • Interest Rate Gap Analysis or Risk Sensitive Assets to Risk Sensitive Liabilities Ratio • Beta • Long term Deposit to Total Deposit • Demand Deposit to Total Deposit
Operational efficiency	➢ Input variables: • Interest expended • Operating expense ➢ Output variables: • Interest earned • Non- interest income	NA
Shareholder's wealth ➢ Short-term ➢ Long-term	• Cumulative Abnormal Return • Buy and Hold Abnormal Return	NA

Objective	Variables used	Sub variables
Level of NPA	Gross NPA Net NPA	NA
Employees awareness	• Awareness on purpose of merger • Awareness on settlement between banks as a part of merger	NA
Pre-& post-merger apprehensions of employees	Psychological Apprehensions	• Fear of demotion • Fear of being non-competent due to merger • Fear of change in salary& other monetary benefits • Fear of job loss • Afraid of technological changes • Insecurity regards to job • Fear about changes of the branch • Loss of identity
	Social& cultural Apprehensions	• Anxious about changes in work culture • Scared of changes in work environment • Job uncertainty • Worried about changes in Power, status& prestige • Afraid of transfer • Stressed& confused • Upset on increment of workload
	Corporate & professional apprehension	• Lack of communication about the merger plan • Insufficient information on process of merger

Objective	Variables used	Sub variables
		• SBI doesn't come under the league of world banks
Employees perception	Job structure and benefits availed	• Salary • Non-monetary/ Monetary benefits • Workload • Job stress • Customer rush • Customer complaint • Number of staffs
	Efficiency of bank	• Deposits • Loans& advances • No. of customers • Level of NPA • Service charges • Cross-selling • No. of branches • No. of ATM counters • Over-all performance of branch
	Growth & development opportunities	• Technological advancements • Introduced innovative products& services • Change in regulation & controlling

Source: Compiled by the researcher
NA- Not applicable

1.7 Operational definition of the terms

Merger

"A combination of two or more companies in which the assets and liabilities of the selling firm(s) are absorbed by the buying firm. Although the buying firm may be a considerably different organization after the merger, it retains its original identity"(Scott, 2003).

Acquisition

"The purchase of an asset such as a plant, a division, or even an entire company"(Scott, 2003).

SBI merger

On 1st April 2017, SBI merged its remaining 5 associates banks namely, State Bank of Travancore, State Bank of Patiala, State Bank of Bikaner and Jaipur, State Bank of Hyderabad and State Bank of Mysore along with Bharatiya Mahila Bank.

Operational efficiency

The operative efficiency measures efficiency or productivity of the bank, it is defined as the ratio between output earned from business and input to run a business operation.

Technical Efficiency (TE)

DMU's (Decision Making Units) overall success in utilizing its inputs. Technical Efficiency can be classified into Pure Technical Efficiency and Scale Efficiency

Pure Technical Efficiency (PTE)

The efficiency of a firm to decrease its input to achieve the desired level of output

Scale Efficiency (SE)

It is a measure of the extent to which a DMU deviates from an optimal scale

Shareholders' wealth

It is the value that shareholders have in the company.

Employees' Apprehension

The fear of employees during the period of a change.

1.8 Hypotheses of the study

- **Effect of merger on Operational efficiency of the Bank**
  - *H1: Operational efficiency of the SBI has improved after the merger.*
- **Effect of merger on shareholders' wealth**
- **Short-term**
  - *H2: Merger of SBI and its associates will provide significant short-term abnormal returns to the SBI shareholders.*
- **Long-term**
  - *H3: Merger and acquisition of SBI and its associates will provide significant long-term abnormal returns to the SBI shareholders.*
- **Effect of merger on employees**
- **Employees' awareness regarding merger**
  - *H4: Employees awareness on purpose of merger is dependent of type of bank, designation, educational qualification and Job experience.*
  - *H5: Employee's awareness regarding settlement between banks as a part of merger is dependent of type of bank, designation, educational qualification and Job experience.*

❑ Pre and post-merger Apprehension

- *H6: Pre-merger apprehensions of bidder and target bank employees are significantly different.*
- *H7: Post-merger apprehensions of bidder and target bank employees are significantly different.*
- *H8: There is a significant difference between male and female employees with respect to pre-merger apprehensions.*
- *H9: There is a significant difference between male and female employees with respect to post-merger apprehensions.*
- *H10: There is significant difference between employee's designation towards pre-merger apprehensions.*
- *H11: There is significant difference between employee's designation towards post-merger apprehensions.*
- *H12: There is significant difference in the pre- merger apprehensions of employees with regard to educational qualification.*
- *H13: There is significant difference in the post- merger apprehensions of employees with regard to educational qualification.*
- *H14: There is significant difference in pre-merger apprehensions of employees on the basis of job experience.*
- *H15: There is significant difference in post-merger apprehensions of employees on the basis of job experience.*
- *H16: There is significant difference in the pre- merger apprehensions of employees with regard to age group.*
- *H17: There is significant difference in the post- merger apprehensions of employees with regard to age group.*

- *H18: There is a significant difference between pre-merger apprehensions and post-merger apprehensions of employees.*

1.9 Limitations of the study

- ❑ Among the associate banks, only SBT has taken for studying perception of employees.
- ❑ Non-cooperation from respondents to reveal information about merger.
- ❑ For measuring the effect of merger on financial performance and shareholders wealth, 5 years data has been taken. Since merger is a long-visioned endeavor, in long run the result may further change.

1.10 Organisation of the Thesis

The research report is organised in nine chapters. Following is the chapterisation of the thesis.

➨ ***Chapter 1: Introduction***

The first chapter acts as a preamble to the thesis. It contains the statement of the problem, significance, scope, objectives, variables, hypotheses and limitations of the study.

➨ ***Chapter 2: Literature Review***

The previous studies under the research area are presented in this chapter. The literatures are classified on the basis of objectives of study. The classification includes Literatures related to effect of merger on performance& efficiency of banks, Literatures related to effect of merger on shareholder's wealth and Literatures related to human factors in the merger.

➨ ***Chapter 3: Research Methodology***

This chapter dedicated to present the methodology used for conducting research. The chapter consists of research design, measurement of instrument, Scaling technique, pilot study, Reliability and validity, Normality, tools used for analysis and period of the study.

- ***Chapter 4: Mergers & Acquisitions in Indian Banking sector: Theoretical framework***

The history of mergers& acquisition in Indian Banking sector briefly summerized in this chapter. This chapter also describes the merger of SBI and its associates.

- ***Chapter 5: Effect of Merger of SBI on the Financial Performance and Operational Efficiency***

This chapter analyses the secondary data associated with the financial performance and operational efficiency of SBI. The effect of merger on financial performance is analysed by CAMELS model. The effect of merger on the operational efficiency is measured by Data Envelopment Analysis (DEA).

- ***Chapter 6: Effect of Merger of SBI on Shareholders' Wealth***

This chapter deals with the analysis related with effect of merger on shareholders' wealth of bidder bank. The analysis includes short-term and long-term wealth effect of shareholders.

- ***Chapter 7: Effect of Merger of SBI on Employees***

This chapter analyse the effect of the merger on employees. The chapter studies the employee's awareness regarding merger, their apprehensions in pre and post- merger period and comparison of bidder and target employees and their perception on post-merger implications.

- ***Chapter 8: Summary, Findings and Conclusion***

In this chapter, present a self-contained summary of the whole work done. It contains the summary of the work done, findings of the study and conclusion.

➨ ***Chapter 9: Recommendations and Scope for Further Research***

The last chapter contains recommendations on the basis of findings and offers scope for further research in the area.

1.11 Conclusion

The chapter provided an introduction to the study on Effect of Merger of State Bank of India and its Associates in 2017- A Pre- Post Analysis. It shows background, significance, scope, problem statement, objectives, hypothesis, operational definitions, limitations and chapter scheme of the study. It is a plan for conducting the study in a smooth way.

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CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

The study analyse the effect of merger on the financial performance of bidder bank and also the effect of merger on the operational efficiency of the merged bank. It also measures the effect of merger on the shareholder's wealth and also tries to find out the employee's apprehension towards the merger in the pre and post- merger period. The researcher had attempted to include all relevant literature under the scope of the study to identify the research gap. Even if the present study covers the banking merger, the studies related with mergers in other sectors and regions were also considered in the literature survey. A three-categorical classification of literature could be drawn from the review process. They include;

- Literature related to effect of merger on performance& efficiency of banks
- Literature related to effect of merger on shareholder's wealth
- Literature related to impact of merger on employees.

Some of the studies may include all the aspects. The detailed reviews under each category are given below.

2.2 Literature related to effect of merger on performance& efficiency of banks

Mathur (2021) evaluated pre& post- merger financial performance of SBI bank through CAMEL model. The data taken 2 years before the merger and 3 years after the merger for the analysis. The study concludes management efficiency, earning quality and liquidity of SBI have improved after the merger. Whereas SBI wants to focus on enhancing the capital adequacy ratio and asset quality.

Qamar & Ud Din (2021) studied the effect of SBI merger with its associates on the performance of SBI by comparing pre- post analysis in five broad performance parameters. Study found that after the merge, SBI evidenced significant positive gains in Business per employee, total income per employee, total deposits, total advances and other assets. The investment growth was adversely impacted and also considerable job loss.

Tandon et al. (2019) assessed the impact of SBI merger with its associate banks and their position before and after the merger. The research reveals that there is a dilution in EPS and no competitive advantage arise due to the merger. The productivity, multi-dimensional banking, operational and customer delights were advantageous to the merged entity. Study concludes that in this era of mega mergers, investments and treasuries will be integrated to achieve cost savings and synergies.

Ishwarya (2019) studied the impact of Mergers& Acquisitions in Indian banking sector. Researcher made a case study on the merger of SBI and its associates. The study is theoretical in nature and fully based on secondary data. The study described the impact of merger, reasons for merger, emerging trends in merger and the pros and cons of SBI merger with its associates. The study suggested that to some extent M&A has been successful in Indian banking sector.

Nirmala & Sathyanarayana (2018) measured the financial performance of banks in pre and post- merger by analyzing financial parameters of both bidder and target. The study includes sample of banks merged between 2000 to 2010, which consists of both public and private banks. The result signifies that private sector banks achieved synergies in all parameters compared to public sector banks, because of voluntary merger. While public sector banks are merged due to forced merger of weak and loss-making entities, though the synergies created in some parameters is offset with negative synergies in other parameters.

Athma & Bhavani (2017) conducted an analysis of pre and post-merger performance of SBI & HDFC Bank. The objectives of the study is to analyse the performance of key parameters of selected banks, to analyse the employee productivity and branch productivity and to analyze the profitability of selected banks. Researchers used CAGR, t test, correlation and regression for analyzing the data. Both banks have shown growth in key parameters and productivity ratios, and the same is quantified by using statistical tools.

Yadav (2017) studied the impact of merger on performance of selected commercial banks in India. The impact of merger on performance of banks were evaluated from three perspectives like physical performance of merged banks, financial performance of merged banks and share price performance. Researcher selected six scheduled commercial banks merged during the period 2004- 2015, out of which three were merger of public sector banks with private sector banks and three were merger of private sector banks with private sector banks. For evaluating the physical performance of merged banks, the variables used were deposits, advances, business, number of branches and number of employees. The financial performance of merged banks was evaluated by using the CAMEL model. And the share price performance was analysed by two dimensions, Abnormal return and Cumulative abnormal return determined as per event study methodology. The data for analysis were collected from Bank's annual reports. Statistical tools like mean, Standard deviation, simple& multiple regression, t-test, one way and two-way ANOVA were used to analyse the performance and testing the hypotheses. The study reveals that the physical performance of merged banks has improved after merger. While the analysis of financial performance of merged banks were given a mixed result, however on an average the overall financial performance of merged banks was increased after the merger. On the share price performance analysis of merged banks reveals that merger is not a preferable tool to shareholders to achieve wealth during the short-term period of merger. On the other hand, merger is a useful strategy by which the bank can expand its operations, serve larger customer base, increase profitability, liquidity and efficiency, but the overall performance and illness cannot be removed through merger.

Shah & Khan (2017) analysed the operating performance of acquirer banks in Pakistan. The financial ratio analysis was used to study the effects of M&A. Paired sample t-test was tested to know the significance of change in operating performance. Study found out most of the financial ratios declined in post- merger period and the performance of acquirer bank didn't reflect any worthwhile improvement.

Satyanarayana et al. (2017) prepared a paper on mega- merger of SBI with its subsidiaries. They made an attempt to explore the economic and political factors which are cause for merger of SBI and to evaluate prospects and consequences of mega- merger. Paper gives an overview of banking in India, about SBI and a brief description of its associates. Study finds that there are a few economic and political factors cause the merger. The capital adequacy ratio has reduced and NPA has raised after merger. The challenges faced by merger are overleap of branches, difficult to manage big banks, huge bad loans, people side issues etc. They conclude that the merger is a win- win for both SBI and its associates.

Singh (2016) made an analytical study of Mergers & Acquisitions of Banking sector in India. Four scheduled commercial banks were taken as sample. Two from Public sector and two from Private sector. Researcher analyzed financial performance through CAMEL model and t-test applied to find the significance. Study concluded that merger is a fruitful strategy to banks, they can expand their activities, improve profitability, liquidity and efficiency whereas the overall growth and financial illness can't be solved by mergers.

Yanan et al. (2016) conducted research to study the effect of merger and acquisition on financial performance of firms registered under USA. The research used panel data analysis with a time period of 6 years before and after merger and acquisition with sample size of 100 companies. To measure the financial performance after the merger four financial measures are used, they are Net profit margin, return on equity, Earning per share and sales growth. Descriptive mean analysis and paired t-test used to analyse the financial performance and empirically found that, merger and acquisition impact profitability of the company and increase their market share and improve the value of stockholders through raising the demand dividends in the market share.

Prajapati (2016) analyzed the impact of merger and acquisition in Indian Banking sector. Researcher selected ICICI bank as a sample for the study and make a comparison between pre and post-merger performance in terms of financial ratios. Net profit and return on asset showed an improvement but all other parameters have no significant improvement in performance. He concluded that due to teething problems, there may be no significant improvement during the first stage of merger but later on, the situation may improve.

Kuriakose & Paul (2016) gave insights on the strategic and financial similarities of bank mergers that occurred in the post- liberalization India. Study considered all merger deals in the post liberalization period and all the important aspects such as relative size of targets, diversity of earnings, efficiency, financial leverage, prudential norms and profitability. Hypotheses of strategic similarities and dissimilarities were tested. The study found that the merging partners are dissimilar in most of the key aspects and it led to an adverse impact on the post- merger performance.

Singh & Gupta (2015) studied a pre and post-merger impact on productivity and profitability of selected merged banks during the period 2004-2015. Researchers selected sample of two banks that is one from private sector, merger of ICICI bank and Bank of Rajasthan and another from public sector that is merger of State Bank of India and State Bank of Saurashtra. To analyze the financial performance of the banks before and after the merger used the financial parameters like Gross profit margin, Net profit margin, Operating profit margin, ROCE, ROE, Debt- equity ratio, EPS, Deposit per employee, Business per branch etc. The statistical tools like Arithmetic mean, Standard Deviation, t-test and p value are used to measure the various financial ratios before and after the merger. The analysis concluded that some of the ratios shows negative effect but most of the ratios effected positive relation that means the financial performance of selected branches were improved after the merger. Study recommended to give more emphasis on those factors which are positively affected on the profitability and productivity.

Manoj Kumar N V (2015) conducted a case study on impact of selected mergers and acquisitions in India on value of the firm. He studied the impact of M&As in terms of financial health, synergies, firm value and value addition/ short fall of selected top 10 M&A's during the year 2010. The study purely based on secondary data, which were collected from websites of selected companies. Tools like summary statistics (mean, S.D, Coefficient of variation, paired t test, skewness and kurtosis) were used to analysis. The analysis of financial health involves profitability, leverage and capital market performance standards. Analysis confirmed that there is no improvement in financial health after the merger. Synergies analysed under three performance standards, they are financial synergies, managerial synergies and operational synergies. Analysis proved that there is no significant difference between synergies of selected companies in pre and post period of acquisition. Finally, the analysis of economic value added related under three performance standards. They are value addition or short fall, economic value added and firm value. The analysis confirmed that there is a decrease in value addition while there is an improvement in firm value.

Masud (2015) made a study to examine the impact of Merger and acquisition on financial performance of Bank. The study was conducted in Pakistani Banking sector were three banks that have been merged or acquired during 2005-2011. Accounting ratios and paired sample t test were used to examine the pre- post performance of banks. Accounting ratios such as ROA, ROE and EPS were used to measure the profitability. Analysis shows a mixture result of merger and acquisition, some of the banks to the positive impact and some of the banks to negative impact on profitability after the merger.

Bassi & Gupta (2015) evaluated the impact of mergers and acquisition on the performance of banks. The study is based on secondary data of five banks. Ratio analysis, mean and standard deviation are used as a tool of analysis. Researchers concludes the study that the merger has positively impacted on net worth, Earning per share, return on capital employed and investors getting abnormal returns due to announcement of merger and acquisition. The event had positively impacted over all financial valuation of the company.

Joash & Njangiru (2015) examined the merged 14 banks in Kenya during 2000 to 2014. The aim of the study is to analyze the effect of merger on the bank's performance on the shareholders' value and on the profitability. They found that M&A raise the shareholders' value and the major reason for the merger in most of the banks are to rise profitability.

Rajamani & Ramakrishnan (2015) have conducted a study on impact of Centurion Bank of Punjab on the financial performance of HDFC Bank. Study analysed before and after merger financial ratios and study revealed that after merger, Gross profit margin, Net profit margin, ROCE, ROE and debt equity ratio shows an increasing trend. But operating profit margin shows a mixed trend. Study also examined the difference in financial ratios before and after merger of banks by applying paired t-test. Result shows that there is significant difference in financial ratios after merger. The study concluded that the financial performance of bank has increased after merger.

Ghosh & Dutta (2015) attempted to study the change in performance level of banks in post-merger period as compared to the pre-merger period. They selected 10 M&A deals in Indian Banking sector during a time frame spanning from 2000 to 2010. They selected HR and financial parameters for the study. The result concluded that three parameters i.e., CAR, ROCE and EPS revealed a better performance in the post-merger period. While HCROI and Loans and advances revealed reduced performance in the post-merger period.

Singla (2015) made a comparative analysis on impact of merger and acquisition on liquidity, profitability, efficiency of acquiring banks in India. Researcher selected six cases of bank mergers occurred in India during the period 2000 to 2006 for the study. Ratio analysis is used to examine the financial performance of acquiring banks. Paired t- test is used to test the statistical significance. The test result indicates that there is no significant difference in financial performance of acquiring banks after merger.

Tiwari (2014) evaluated the efficiency of mergers and acquisitions of the selected merged banks on the basis of selected variables prior to and after mergers and acquisitions. The study selected Five public sector banks merged in different dates, and considered four years prior to merger and four years after the merger for analysis. Eleven variables were selected to evaluate the efficiency of mergers, they are Capital, deposits, investments, advances, fixed assets, interest earned, total expenditure, net profit and total assets. Secondary data were used for the analysis and it has been made by using mean, standard deviation, growth rate and t test. The analysis proved that there is a significant difference in the mean value of selected variables before and after merger.

Abbas et al. (2014) conducted a study to evaluate the financial performance of banks in Pakistan after merger and acquisition. A sample of 10 banks merged during the period 2006-2011 were selected for the study. The financial and accounting ratios of selected banks were collected from financial statements. All the ratios were calculated for two years Pre and post M& A. Profitability, efficiency, leverage and liquidity ratios were used to measure the financial performance. The result shows that there is no positive improvement in the financial performance of the banks in Pakistan after M& A.

Kandil & Chowdhury (2014) reflected the impact of merger& acquisition on performance of Islamic banking industry in the United Kingdom. Quantitative method is used to calculate long- term share price performance of the UK Islamic banks. Researcher controlled the Islamic bank in the event time approach and by using Buy and Hold Abnormal Return method calculated annual abnormal returns over a period of five years. Research findings indicated that there were significant differences in the post-long-run performance of Islamic mergers and acquisitions among UK Islamic banks to control the crises the country faced from 2007 to 2010. In high-tech industries, acquiring Islamic banks had a negative impact on long-term performance.

Meena & Kumar (2014) studied the impact of merger and acquisition in the leading banks of India. They are ICICI Bank, SBI & HDFC. The paper comprised the trend of M&A in Indian Banking sector and the performance of banks after the merger. They analysed performance of merger banks by comparing pre and post-performance by using financial parameters like net profit margin, operating profit margin, ROCE, ROE, EPS, CAR, DPS etc. Paper concludes that to some extent M&As has been successful in Indian Banking sector. Paper suggested that Government and policy makers should promote for merger of strong banks to compete with foreign banks and to enter in the global financial market.

Azhagaiah & Sathishkumar (2014) studied the effect of M&A on the attributes of operating performance and the improvement in OP of acquiring firms in post-merger period by selecting 39 manufacturing firms merged during the year 2006- 2007. They used Factor analysis, Correlation matrix, Multiple regression and chow test to study the OP in the pre and post-merger period. The study found that M&A had significant positive impact on the operating performance of selected manufacturing firms in India in the post-merger period.

Nandy & Baidya (2012) measures and examines the technical efficiency of SBI and its five subsidiaries before and after their hypothetical merger. The study has utilized two basic DEA (Data Envelopment Analysis) models- CCR (Charners, Cooper and Rhodes) and BCC (Bankers, Charners and cooper) to measure technical efficiencies of selected major Indian commercial banks before and after merger of SBI and its associates for the financial year 2009-10. The results (before merger) reveal that only nine banks out of 31 under evaluation are found to be 100% technical and scale efficient. The results (after merger), reveal that merged SBI has a CCR efficient.

Devarajappa (2012) made a study on effect of merger on the financial performance of banks by taking the merger of HDFC Bank Ltd. and Centurion Bank of Punjab Ltd. He made a comparison of pre and post-merger financial performance. Investigator applied independent t- test for performance analysis and result suggests that after the merger the financial performance of banks had increased.

Ravichandran et al. (2010) conducted a study to analyse the efficiency of banks which are merged through market forces. The performance and efficiency analysed by using CRAMEL type variables, before and after merger for the selected public and private banks by applying regression. And they also applied factor analysis using Kaiser normalization method to find out the important variables. They suggest that the post-merger performance of the banks is more concentrated on their high interest income activities and the main motive for the merger is to scale up their operation.

Sinha et al. (2010) examined the impact of mergers and acquisitions on the selected financial institutions in India during 2000 to 2008. They made analysis of study by two stages. Ratio analysis is used to calculate the change in the position of companies during the study period. Secondly, they used Wilcoxon signed rank test to examine changes in the efficiency of the companies during the pre and post-merger periods. Study found a significant change in the earnings of the shareholders while there is no significant change in the liquidity position of the firm. The study concludes that M&A

cases in India show a significant correlation between financial performance and the M&A deal.

Sony & Kumar (2010) analyzed the appreciation method and adequacy of the hastily ratios fixed in spontaneous amalgamations in the Indian Banking Sector and the use of swap proportions for bank appraisal were examined, but the last trade ratio was usually unjustified by the financial statements of the banks.

Kumar. R (2009) examined post- merger operating performance of acquiring companies involved in merger activities during the period 1999 to 2002 in India. For analyzing acquiring companies gains after the merger, operating performance approach is used which compare pre and post- merger performance of companies by using accounting data. Study found that in post- merger period on an average there is no improvement in profitability, asset- turnover ratio and solvency of acquirers compared to pre- merger values.

Mantravadi & Reddy (2007) evaluated the impact of merger on the operating performance of bidder firms in different firms. They selected all the mergers in public limited traded companies in India during the period 1991 to 2003. They used pre and post financial ratios to examine the effect of merger on firms. Result suggested that there was slight variation in terms of impact on operating performance after mergers. Among the different industries in India, Banking and finance industry had a slightly positive impact on profitability. Pharmaceuticals, textiles and electrical equipment sector showed the marginal negative impact. Some of the industries had a significant decline in terms of profitability and return on investment after merger.

Berger. Allen N et al. (2004) studied the dynamics of market entry of mergers and acquisitions in the banking industry. They suggest that mergers and acquisitions in the banking industry are associated with statistically and economically significant increases in the profitability of entry.

2.3 Literature related to effect of merger on shareholder's wealth

Das & Mariappan (2021) examined the effects of the announcement of merger on shareholders wealth of the SBI and select associate banks. The study applied event study methodology to measure the short- term impact on shareholder's wealth. Study used single factor model and two factor model. The study found that anchor bank's shareholders haven't gained due to merger but there is overall gain for the target bank's shareholders.

Hassan & Giouvris (2020) investigated shareholders' value adjustment window in reaction with financial institutions merger announcements in the immediate event window and extended event window. Also analysed the pre and post- merger performance on accounting measures, includes several cash flow measures and profitability measures. Event window analysis is used to calculate abnormal returns and cumulative abnormal return in the immediate window of merger event and buy and hold event study analysis is used to examine the effect on extended window. Employed accounting ratios to measure the performance analysis. The results indicate that FIs mergers destroy shareholders value for acquiring firms that are seeking to penetrate new markets. Shareholders' value creation enabled through market development and product development strategies in short and long run. Diversification strategy didn't influence the shareholders' value. Study stated that local bank to bank acquisitions create shareholders' value and improve liquidity and economic value in short period. Cross border bank to bank mergers will create shareholders' value in long run whereas it associated with high cost and risky.

Kumar. P & Kuncolienkar (2020) investigated the impact of M& A deals on long term shareholders wealth creation using BHAR. The study examined 21 M& A announcements in the Indian Banking sector. The study found that the announcement of M&A deals didn't create significant improvement in BHAR for shareholder of acquirer banks. By analysing ABHAR (Average Buy and Hold Abnormal Return) the study perceived that on aggregate basis the M& A announcements has generated BHAR for the portfolio of Indian Banks. The study concludes that BHAR for bidder banks didn't create any significant difference when grouped as voluntary merger deals and compulsory merger deals.

Kiesel et al. (2017) examined the post- merger performance effect on short- and long-term abnormal shareholders return in logistic service industry. A sample of 826 merger announcements has taken place between 1996 and 2015. The results revealed that overall transactions show significant positive abnormal returns, acquiring companies' post- merger performance differed according to the logistic services offered. In the short- run trucking, railway, 3PL and air cargo companies show significant positive abnormal return while, sea fright revealed marginal effect and CEP companies do not show any significant return. In long- run, railway& 3PL companies show a significant abnormal return, whereas trucking, sea fright and air cargo do not show significant returns and CEP companies shows significant losses.

Chatterjee (2016) examined impacts of the acquisition announcement of SBI on shareholders wealth through an event study. SBI was announced acquisition of its five associates on 17 may 2016. Researcher analyzed the impact on the shareholders' wealth creation by calculating the abnormal return on the shares of SBI by using an event window of 27 days consisting of the date of announcement, 13 days pre and 13 days post announcement date had been considered. And also used a short event window of 7 period i.e., 3 days pre and 3 days post announcement date. The result shows that there has not been any significant impact on the announcement of shareholders' abnormal return, showing that the market price movements are not only affected by the current information, but also relates to several past information and future expectation of shareholders.

Tianqui (2016) studied the impact of mergers & acquisition on shareholders' wealth and efficiency in banking industry. Researcher used CAPM model to calculate CAR (Cumulative Abnormal Return). Research indicates that bank mergers and acquisitions create shareholder wealth for the target bank acquired and, in many cases, the acquiring firm's shareholders lose out due to their severe dilution in the newly formed bank; the same holds true with efficiency.

Ahmad (2016) studied the impact of merger on shareholders wealth in the Indian Banking sector. Researchers took a sample of five mergers during the period of November 2002 to May 2010. Standard Risk Adjusted Event Methodology was used to explore the impact of Mergers on Shareholder's wealth. According to the study, the expectation of shareholders of target and bidder banks for excess returns could not be realized based on public information, and they were unable to earn abnormal returns neither before nor after announcement of M&A transactions. Merger announcements for both the bidder and target are statistically insignificant and economically relevant.

Shaomeng (2015) made an empirical study looking at how frequent acquisitions can affect the performance of an acquiring firm's merger and acquisition strategy. The study based on a large sample that consists of 14000 acquisitions from more than 100 countries. The study found that if the acquiring firms involved in frequent mergers, the investors will perceive a lower value.

Nnadi & Tanna (2013) made a comparative study between domestic and cross-border merger& acquisition of European commercial banks. The study aimed to analyze the value gains to acquirers in large commercial banks, occurred during the period 1997-2007. 62 bank mergers are taken as sample for the study. Event study methodology is employed using a market model to determine Cumulative Standardised Abnormal Returns (CSAR) to acquiring banks around the announcement date of merger deals. Cross- sectional regression is used to determine specific characteristic driving acquirers' CSAR. The study found that cross- border mergers are earned significant negative announcement period acquirer return, whereas domestic mergers have marginally negative but not significant returns. The acquiring banks' operational cost efficiency and capital strength are found to be significant in influencing excess returns.

Kolaric & Schiereck (2013) analyzed the short-term and long-term shareholders wealth effects of domestic and cross-border acquisition announcements of banks in Latin American. Study used the event study methodology to analyze the short -term wealth effects and buy and hold abnormal return analysis (BHAR) conducted to study the long- term wealth effects and a cross sectional regression analysis to investigate key drivers of successful mergers. Results indicated that bank mergers and acquisitions in Latin America were overall successful in short-term. The long-term results also indicate bank mergers and acquisitions in Latin America were highly successful events for the shareholders of acquiring institutions and also found that M&As seems to be an appropriate tool for wealth creation.

Bashir. A (2011) evaluated the short-term value creation effect of mergers and acquisitions of Pakistan from 2004 to 2010 by using event study methodology. The Ordinary Least Squares (OLS) market model was used as event study. The wealth for the shareholders of target and bidder firms was examined by estimating cumulative abnormal returns of an 11-day event window surrounding the merger announcement. The window begins five days prior to the event date and ends five days after. The study found that target firm suffer insignificant loss while acquiring firm enjoy insignificant gain. Study concludes that during the 11 days event window neither target nor acquirer firms created or destroyed value for shareholders.

Liargovas & Repousis (2011) examined the impact of mergers and acquisitions on the performance of Greek banking sector. Researchers used event study and operating performance methodology. Using event study approach to examine the impact of mergers and acquisitions on the performance of the Greek Banking sector, they found ten days prior to the announcement of merger and acquisition; shareholders receive considerable and significant positive cumulative average abnormal returns (CAARs). The results show that bank mergers and acquisitions have no impact on financial ratios. Findings indicates that there is no improve on financial performance after merger and acquisition.

Radhakrishnan (2011) examined the following objectives; the effect of M& A announcement on share price of acquirers, whether M&A increase aggregate wealth of shareholders, effect of merger on operating and financial performance of acquiring firms and also the effect of M& A on long term share price performance. Event study methodology is used to measure the announcement period returns of M& A. Accounting ratios were used to examine the operating& financial performance of acquiring firms. Buy and Hold Abnormal Return (BHAR) methodology used to examine the impact of M& A on long term share price performance of acquirers. The study found that there is weak evidence of short- term announcement period gains to shareholders in various sectors. The financial ratios on operating performance revealed that merger didn't bring much needed synergies to acquirers. A declining trend showed in financial performance of acquirers after the merger. The BHAR also didn’t give any significant positive return to shareholders.

Tan & Hooy (2004) outlined the main aspects of Malaysian Bank merger program and evaluated the effects of the merger program on the volatility of the Malaysian banks stock returns by using EGARCH model. Due to the eruption of Asian financial crisis in mid-1997, had elevated financial crisis. Central bank of Malaysia, announced a consolidation program for domestic financial institution in July 1999. Study found that the proposed merger brought stability for the bank’s stock returns, especially at the time of initial merger announcement. The analysis also revealed that before the announcement a persistency of positive risk return tradeoff and asymmetrical news effects in the bank stock. After the announcement, bank stock evidenced a huge reduction in the volatility and asymmetrical news effects.

Pilloff (1996) examined both the cross-sectional and average characteristics of merger-related performance changes and abnormal returns for forty-eight mergers involving publicly traded banking institutions occurring between 1982 and 1991. Even though both performance measures and consolidated abnormal returns have remained relatively stable, cross-sectional properties have diverged. Study found that the highest abnormal returns are associated with mergers that have the greatest likelihood of cutting expenses is consistent with the popular notion that mergers boost efficiency. Study concludes that abnormal returns and performance are consistently insignificantly correlated, which shows that market expectations do not affect merger-related gains.

2.4 Literature related to impact of merger on employees.

Arunachalam (2021) studied the impact of organizational restructuring on employees’ stress and job outcomes in Indian Banking sector with special reference to SBI. Paired t test employed to compare the level of job outcomes experienced by the employees before and after the merger. The study found that the psychological contract breach has an impact on Job stress. Results also show that merger made a positive impact on the employees, and enhanced job involvement and job engagement after the merger.

Savović & Babić (2021) key objective of this paper is to provide insight into the influence of behavior factors (corporate cultural differences and transformational leadership) on acquisition performance, based on the mediating role of speed of post-acquisition change (as a process factor), within the context of a transitional economy. Model was tested on domestic and European companies on a sample of acquisitions in Serbia. To test the research hypotheses linear regression analysis was used and Baron and Kenny's (1986) approach was used to test the mediator hypothesis. This study evaluated the statistical significance of indirect or mediated effects using Statistical Product and Service Solutions (SPSS) macros provided by Preacher and Hayes (2004). Mediator analysis found that acquisition performance is impacted directly and indirectly by corporate cultural differences and transformational leadership. This study may be useful for managers involved in acquisition processes, since it helps them make appropriate decisions at various stages of an acquisition so that they can obtain sufficient levels of employee commitment and trust that will lead to improved acquisition results.

Alvarez-González & Otero-Neira (2020) explored the employees' perception on customers reactions to mergers and also how mergers and acquisitions in the banking sector affect customer relationships. A case-analysis methodology is used to examine 54 M&A transactions in the Spanish market between retail banks and saving banks during 2009 and 2014. Study reveals that employees' perceptions on the impact of M&A on customer relationships indicate that it negatively affects prices, branch locations, and routines of financial activity, and positively affects products and services offered after the M&A. mediates the relationship of the contribution dimension of LMX with cognitive reactions.

Vosse & Aliyu (2018) researchers aimed to study the impact of merger on employee trust and well- being. Study focused to quantitatively test the relationship between communication efforts, HR management efforts and cultural consistence and their impact on employees trust during the merger.139 employees of two high performing institutions which recently merged were surveyed. The data were analyzed through structural equation modelling. The study resulted that HR planning and effective communication are vital for the success of merger.

Abdullah et al. (2018) studied objectives were to see if successful acquisition could be enhanced through the implementation of good leadership, people management, a simplified organizational structure, and effective communication. It was found that all those variables except communication were effectively implemented during the acquisition process.

Appelbaum et al. (2016) addressed the key issue of stress, which is the outcome of mergers and acquisitions throughout the process of merger i.e., pre- merger, during merger and post -merger. Study suggested the process of managing and strategy in each phase of merger.

Gaur (2016) conducted research on impact of M&A on employees in banking sector on their psychological, behavioral, job satisfaction etc. For achieving the objectives, they introduced twenty-one variables based on intense literature review for measuring attitude of the employees and fourteen variables were established after literature review for assessing their job satisfaction after merger. For the study researcher taken merger of ICICI Bank and Bank of Rajasthan into consideration. 25 branches in the Jaipur city were considered for the study. 300 employees from each category (target and bidder bank) were selected for the study. The study found that there is a significant difference between in the attitude and level of job satisfaction of employees before and after merger and there is a significant difference between attitude and job satisfaction of employees in target and bidder banks.

Sharma (2015) analyzed the type of stress among bank employees in corporate sector and the way it affects their working. Most important among them are the fear of losing job, uncertainty of career, strikes, etc. Researcher suggests certain stress leaving measures like proper communication on the part of management, counselling, are required to contain this problem.

Frantz (2015) depicts a deep understanding of critical, micro level aspects of Post-Merger Integration (PMI) process. This paper presents a synthesis of numerous theories, perspectives, and ideas from various scholarly communities, along with a focus on the basic human interactions that define a culture and leads to positive performance. The researcher pointed that the information flow is the lifeblood of an organization, so when merging organizations restructure, the information flow is break up, often at a pronounced cost in the near future. To achieve social unification and performance value goals of the combined organization, information flow channels must be repaired. Lastly, the author advises managers to focus on dyadic information exchange with their direct reports to effectively manage PMI. Finally, the chapter suggests studying PMI dynamics at the micro level of organization behavior through computer modeling, simulation, and laboratory experiments. The use of such methods may also enable the prediction of the outcome of specific post-merger integration scenarios.

Mirc (2014) human factors are examined in relation to mergers and acquisitions performance. The findings were grouped in to three categories, Individual, organizational and managerial related factors. In spite of the numerous research studies, influential factors are often studied as static settings approached in isolation without measuring their direct impact on post-acquisition performance.

M. Babić et al. (2014) explored the relationship between transformational leadership and post-acquisition performance, incorporating employee attitudes toward change as a mediating factor. A total of 208 employees (including 91 managers) were surveyed from ten acquired companies in Serbia. Exploratory factor analysis is identified two dimensions of transformational leadership in a transitional economy: inspiring and stimulating employees and responding to employee problems. Research hypotheses was tested by multiple regression analysis. The results of the analysis suggest that inspiring and stimulating employees has an indirect impact on post-acquisition performance through the mediating effect of employee attitudes toward changes, while responding to employee problems has both a direct and indirect impact on post-acquisition performance.

Shook & Roth (2011) seeks role of HR practitioners with mergers, acquisitions and downsizings. Thirteen HR practitioners were interviewed for this qualitative study. A constant comparative method was used to analyze the data. Study reveals that human resource practitioners weren't involved in downsizing, mergers, or acquisition planning. This study found neither the practitioners nor other HR team members played an upfront due diligence role in their organizations' change initiatives.

Nikolaou et al. (2011) explored the role of organizational silence and trust on employees' attitude in post- merger phase. Research shows that organizational trust is negatively related to organizational silence and positively related to merger attitudes. Study found that in post- merger phase the significant role of organizational silence was also identified through the negative relationships with merger attitudes, but organizational silence is a significant mediator between organizational trust and merger attitudes.

Bhal et al. (2009) assessed cognitive, affective and behavioral reactions of employees to the merger and acquisition. Data were collected from 225 managers of four banks that had gone through mergers (two mergers), through structured questionnaire including standard scales of Leader- member exchange (LMX), leader communication and employees' reaction to M&As. Affect is found to mediate the relationship between cognitive and behavioral reactions to M&A. Leader communication fully mediates the relationship of the contribution dimension of LMX with cognitive reactions.

Chun (2009) the purpose of this paper is to investigate how employees' views of a merged organization differ based on their pre-merger backgrounds, and to explain how an employee's perceived organizational virtue impacts their emotional response to the combined organization, including satisfaction, emotional attachment, job security, and loyalty. Study found that employee loyalty, perceived job security, satisfaction, and emotional attachment were strongly correlated with employee empathy, warmth, and conscientiousness. Further, the acquiring companies had more negative feelings toward the merged organization than was expected from existing literature.

Huang & Kleiner (2004) described the challenges in mergers and acquisitions deals. Authors stated by quoting several studies that cultural incompatibility is rated as the biggest barrier against consolidation being a success. This study recognizes survey data showing employees are apprehensive about slow-paced integration and provides guidelines for post-merger/acquisition management. In conclusion, the integration process is key to making acquisitions successful.

Appelbaum et al. (2000) examined the multiple organizational factors impacting on merger throughout the merger process (pre, during and post- merger). Researchers addressed the importance of constant and clear communication throughout the mergers and acquisitions. They noticed the change and reactions of employees to these changes. Study identified the critical factor is the stress, which is the outcome of merger and acquisition. The study concluded with the strategies throughout the phases of merger.

2.5 Research Gap and Conclusion

This chapter summarizes the studies done related to Mergers and acquisitions, effect of merger on performance of bidder firm, effect of merger on shareholders' value and impact of merger on employees. Some of the studies were exclusively related with merger of SBI& its associates. From the literature review it can be inferred that a large number of studies about merger and acquisitions have been carried out inside and outside India. However, researcher found certain limitations exists in the existing literature. Even though many studies were conducted to measure the effect of merger on financial performance most of the studies are not giving clear picture on the effect on various aspect of performance like liquidity, profitability, efficiency and earning performance.

Most of the studies focus on announcement impact of merger through event window. Some of the studies focus on effect of merger from the perspective of employees and customers in different states in India. But studies measuring the effect of merger of SBI on employees in Kerala content is very rare. Since the merger happened in 2017, no studies were found covering long term impact of merger on financial performance, shareholders wealth and efficiency of SBI after its merger with associate banks.

By reviewing the literature, the researcher was able to identify the research gaps in the field of study. Hence, the present study will fill the gap in the existing literature and contribute to understand the mega merger of SBI with its five associates and BMB in detail.

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CHAPTER 3
RESEARCH METHODOLOGY

3.1 Introduction

"Research methodology is a way to systematically solve the research problem. It may be understood as a science of studying how research is done scientifically" (Kothari, 2004). This chapter provides the various steps adopted by the researcher for studying the research problem in detail.

3.1.1 Research design

The research is descriptive in nature.

a) Source of data

The study used both primary and secondary sources for information.

➢ **Primary data**

Primary data has been collected from the SBI employees in Kerala who has been experienced the merger. Only former SBT employees are considered for target employees. Primary data were collected with the help of structured questionnaire during the period 2018- 19.

➢ **Secondary data**

The secondary data needed for the analysis has been taken from the annual reports of SBI, and website of National Stock Exchange.

Other secondary data is collected from the following sources consisting journals, newspapers, books, websites, periodicals and reports.

- Website of RBI
- Website of SBI

- Research Dissertations and Theses
- Books, Journals, Articles, Periodicals, Working papers and Newspaper reports and other publications
- Yahoo finance

b) Sampling design

i. Population

SBI employees consist of officers and clerical staff in Kerala is the population of the study. As per the report of SBI in 2018-19, 14131 employees are working in Kerala, which spread across 14 states in Kerala.

ii. Selection of samples

For collecting sample, among the target bank employees, SBT employees are considered. Because SBT was treated as Kerala's Bank since, the population of the study is SBI employees in Kerala. From the population both target bank and bidder bank employees are the sample units for the study.

iii. Sample size

The total number of SBI employees in Kerala during 2018-19 is 14131. The following formula shows how sample size can be calculated from an infinite population. After applying the infinite formula, the correction factor for finite population is applied, since the population is finite

The highest std. Deviation among variable is taken for calculating sample size

$$no = \left(\frac{zs}{e}\right)^2$$

no = Number of sample size

z = standardized value corresponding to a confidence level (1.96 for 95% confidence level)

s = sample standard deviation or estimate (1.447)

e = acceptable magnitude of error (assumed as 0.15)

N = population size

$$no = \left(\frac{1.96 \times 1.447}{0.15}\right)^2 = 332$$

The sample size is refined after applying the correction factor for finite population.

$$no = \frac{noN}{no + (N - 1)}$$

$$no = \frac{332 \times 14131}{332 + (14131 - 1)} = 324.4$$

The sample size is finalised as 325.

iv. Sampling method

Multi stage random sampling is used for the selection of sample. In the first stage, randomly selected seven districts by using lottery method, the selected districts were Kannur, Calicut, Malappuram, Thrissur, Ernakulam, Trivandrum and Palakkad. In the second stage, from the selected districts SBI branches were selected in proportion to the number of branches in each district randomly by using lottery method. The entire employees from the selected branches are the sample for the study.

Table 3.1

Selection of branches in proportion to number of branches in each district

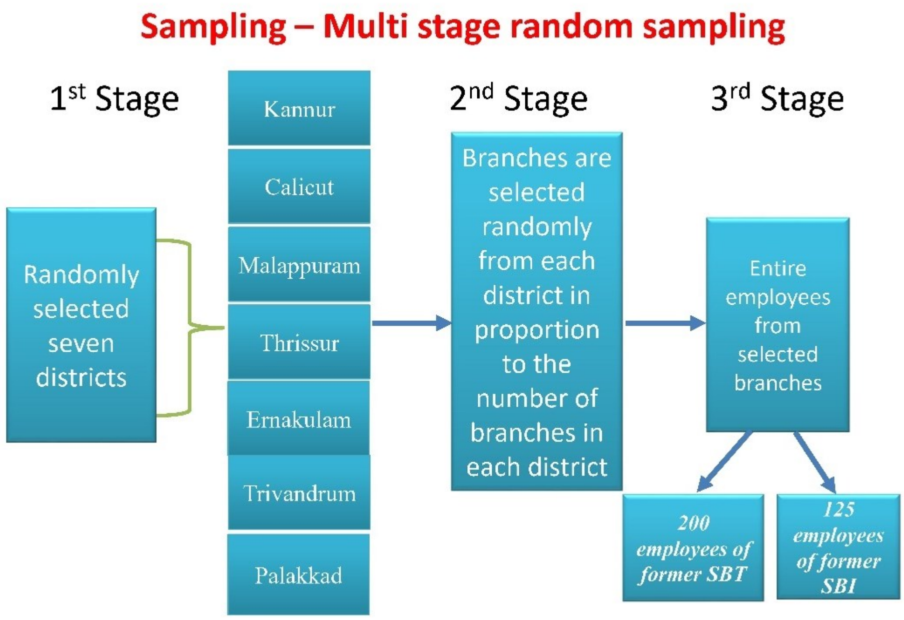
Sl. No.	District	Number of branches	Number of selected branches (proportion)
1.	Kannur	81	11
2.	Calicut	56	8
3.	Malappuram	74	10
4.	Thrissur	94	13
5.	Ernakulam	235	33
6.	Trivandrum	214	30
7.	Palakkad	104	14

Source: SBI official reports

The sample size determined as 325 SBI employees in Kerala. The researcher approached directly to the employees of selected branches, the employees include officers and clerical staffs. In the initial stage of data collection most of the employees were reluctant to fill the questionnaire and they were not ready to disclose the details. The researcher removed the personal identifying information from the questionnaire and sought permission from the headquarter of SBI at all districts. 309 questionnaires were collected by direct approach and 16 were through google forms.

Figure 3.1

Sampling Method



Source: Compiled by the researcher

3.1.2 Measurement of research instrument

The primary data were collected with a structured questionnaire collected from SBI employees for getting factors leading to apprehension regarding merger and their perception on merger in pre and post- merger period. The questionnaire developed by reviewing literature, discussion with the SBI bank employees. It has been finalised with the help of expert advice in the field of statistics and finance. The questionnaire starts with the type of bank employees, employee’s awareness regarding merger, their attitude towards merger, factors leading to apprehension of employees in pre and post-merger period, employee's perception on different aspects after the merger and ends with demographic factors.

❖ **Pretesting and revision of instrument**

Pretesting helps to find out any weakness or errors in the questionnaire, and ensures its credibility. Tests were conducted on all aspects of the instrument, including time taken to fill out, clarity and bias of sentences, lack of irrelevant and ambiguous questions, flow and continuity, question wording etc. Pre testing was made possible with the help of 5 SBI bank employees and two experts in the field. They were asked to make suggestions to make the instrument better. Minor changes were made including avoiding confusing questions, converting dichotomous questions in to scale type, avoiding repeated and biased questions and adding some important items. This enables the researcher to incorporate useful changes into the questionnaire to make it more precise, structured, and content-oriented.

3.1.3 Scaling technique

Table 3.2

Source of measurement scale adopted

Construct	Measurement indicators	Source	Measurement scale adopted	Questions
Pre& post- merger apprehension	• Demotion • Being non- competent • Change in salary& other monetary benefits • Job loss • Technological changes • Insecurity regards to job • Change of branch • Loss of identity • Changes in work culture • Changes in work environment • Job uncertainty • Changes in power, status& prestige • Transfer • Stress& confusion • Increment of workload	(Gaur, 2016; Kalaichelvan, 2011) By discussion with experts in the field.	5-point scale starting from strongly disagree to strongly agree	7.1 to 7.18 and 8.1 to 8.18

Construct	Measurement indicators	Source	Measurement scale adopted	Questions
	• Lack of communication • Insufficient information • Bank's position			
Job structure and benefits availed	• Salary • Non-monetary/ monetary benefits • Workload • Job stress • Customer rush • Customer complaint • Number of staff	By discussion with experts in the field	5- point scale starting from decreased to a great extent to increased to a great extent	9.1 to 9.7
Efficiency of bank	• Deposits • Loans& advances • Customers • NPA • Service charges • Cross- selling • No. of branches • No. of ATM counters • Overall performance	By discussion with experts in the field	5- point scale starting from decreased to a great extent to increased to a great extent	10.1 to 10.9

Construct	Measurement indicators	Source	Measurement scale adopted	Questions
Growth& development opportunities	• Technological advancements • Innovative products& services • Regulation& controlling • Accounting practices	By discussion with experts in the field	5-point scale starting from strongly disagree to strongly agree	11.1 to 11.4

3.1.4 Pilot study

This pilot study was necessary in order to ensure the validity and reliability of the research instrument, as it will provide additional information to the researcher so that the research instrument can be improved and finalised before going for the final data collection. The study was carried out by taking 50 samples from Malappuram and Kozhikode districts and proper modifications were incorporated before final data collection.

3.1.5 Reliability and Validity

Reliability and validity are used to validate the scale.

- **Reliability**

Reliability measures whether an instrument can be interpreted consistently across different situations (Field, 2016). A reliable measure is one that is consistent when we test it repeatedly.

Cronbach's alpha is the most common measure of scale reliability. The value of Cronbach's alpha lies between 0 to 1. The general rule of thumb is that a Cronbach's alpha of 0.70 and above is good, 0.80 and above is better and 0.90 and above is best. To retain an item in the scale the alpha must be equal to .70 or higher.

Table 3.3

Reliability statistics

Sl. No	Construct	No. of items	Cronbach's alpha
1.	Pre- merger apprehension	18	.943
2.	Post-merger apprehension	18	.949
3.	Job structure& benefits availed	7	.712
4.	Perception on efficiency of bank	9	.756
6.	Perception on post- merger implications	3	.912

Source: Primary data

From the table it can be interpreted, for all the constructs Cronbach's alpha is greater than 0.70, hence it ensured the research instrument is reliable for the final data collection.

➢ **Validity**

Validity measures whether an instrument actually measures what it sets out to measure(Field, 2016). "Validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure. Validity can also be thought of as utility. In other words, validity is the extent to which differences found with a measuring instrument reflect true differences among those being tested"(Kothari, 2004). In this study two types of validity are tested content validity and face validity.

a. Content validity

Content validity means checks "the elements within a measurement procedure are relevant and representative of the construct that they will be used to measure"(Haynes et al., 1995). Content validity is ensured with the assistance from expert in the field. The researcher consulted various bank employees in SBI and made changes in questionnaire as per their instructions.

The researcher has done extensive literature review in the field of bank merger& acquisition. This could also help to identify the items in the scale and modify the scale as per the need of the situation.

b. Face validity

"Each question or item Research on the research instrument must have a logical link with an objective. Establishment of this link is called face validity"(Kumar, 2011).

Face validity measure the overall validity of a test or technique. The questionnaire has been shown to research supervisor, statistician, senior academics, experts in banking sector and co- research scholars.

Hence, with these entire mediums, the researcher ensured the content validity and face validity of the research instrument.

3.1.6 Normality

To get accurate results, it is necessary to conduct an efficient analysis, which involves applying powerful tests. While powerful tests yield reliable results, they also require certain assumptions like normality, homogeneity, etc to be fulfilled. “An assessment of the normality of data is a prerequisite for many statistical tests because normal data is an underlying assumption in parametric testing”(Mishra et al., 2019). A number of methods are available to test the normality of continuous data. Out of these, the most popular methods are Shapiro-Wilk test, Kolmogorov-Smirnov test, skewness, kurtosis, histogram, box plot, P–P plot, Q–Q plot, and mean with standard deviation. The Shapiro- Wilk test is appropriate for small sample size (<50) and for large sample size Kolmogorov- Smirnov test is used ($n \geq 50$). Both of the above tests assume that the data represent a normally distributed population. Null hypothesis is accepted when $P > 0.05$, and data are called normally distributed. Skewness and kurtosis must be zero in a normal distribution. Positive values of skewness indicate most scores are concentrated on the left side of the distribution, while negative values indicate most scores are concentrated on the right. A flat and light-tailed distribution implies a negative value of kurtosis, while a peaked and heavy-tailed distribution represents a positive value of kurtosis. The data will vary from a normal distribution if the value deviates from zero(Field, 2016). The researcher verified that everything was normal. A histogram shows an estimated probability distribution for a continuous variable. If the graph is symmetrical around the mean and generally bell-shaped, we can assume that the data are normally distributed(Mishra et al., 2019). In the Q-Q and P-P plots, the data is said to be normally distributed if the points are close to the diagonal line. The researcher made all the tests and checked the normality.

The results of the Kolmogorov- Smirnov and Shapiro- Wilk test and shows that some variables have p value above 0.05. The Skewness and kurtosis value for most of the variables lies between ± 2.58 and ± 1.96. The graph of the histogram is approximately bell shaped. The normal Q-Q and P-P plots, points are close to the diagonal line. The findings showed that the data were normally distributed across the variables, thus the researcher conducted parametric tests for arriving at inferences about the primary data.

According to central limit theorem, the distribution with large samples are normally distributed regardless of the shape of the data. Which means if the sample size is 30 or above the distribution is meant to be normally distributed.

According to the homogeneity assumption, the variance of the outcome variable should be the same across all groups. The homogeneity of variance is examined using Levene's test.

3.1.7 Tools for data analysis

Following are the tools and tests used for primary and secondary data analysis.

- **Mean, Standard deviation, percentage**

Mean is the widely used measure of central tendency. “Mean, also known as arithmetic average, is the most common measure of central tendency and may be defined as the value which we get by dividing the total of the values of various given items in a series by the total number of items”(Kothari, 2004).

Standard deviation is the most widely used measure of dispersion. “Standard deviation is defined as the square-root of the average of squares of deviations, when such deviations for the values of individual items in a series are obtained from the arithmetic average”(Kothari, 2004).

A percentage is used to compare data from two separate groups and simply implies per hundred.

- **Independent sample t test**

It is a test for evaluating the significance of the difference between the means of two different independent groups. “The independent t-test is used in situations in which there are two experimental conditions and different participants have been used in each condition"(Field, 2016).

- **Paired-sample t-test**

Paired-samples t-test is used for comparing related samples. This test is suitable for before and after treatment study.

- **One- way ANOVA**

One way Analysis of Variance is a parametric test used to compare means of more than two groups. “The ANOVA technique is important in the context of all those situations where we want to compare more than two populations”. “Using this technique, one can draw inferences about whether the samples have been drawn from populations having the same mean”(Kothari, 2004).

- **Post hoc analysis**

“Post hoc test consists of pairwise comparisons that are designed to compare all different combinations of the treatment groups”(Field, 2016). To find out the difference after finding significant difference in the group means use the post hoc test. Scheffe test of post hoc is one of the popular. Researcher used Scheffe test of post hoc in the present study.

- **Event Study Methodology**

An event study methodology has become a standard method of evaluating stock price reactions to specific events in the finance literature. In event studies, the security prices surrounding a well-defined event are examined to determine how markets respond to such events. A specific event is tested to see if it results in abnormal returns as stock returns change based on market factors or firm-specific factors such as earnings announcements, mergers and acquisitions, etc. Information about the event is released through the financial press, corporate announcements, or stock exchanges where the security is listed. By examining these events, a researcher can determine if the security holders earned abnormal returns (Mcwilliams & Siegel, 1997; Rani et al., 2016).

To determine whether SBI M&A have a significant effect on the shareholder's wealth in short-term and long-term, researcher employ the event study methodology as introduced by Dodd & Warner (1983) and Brown & Warner (1985) and extended by Barber & Lyon (1997). T examine short- term announcement effect on shareholders' wealth employ CAR (Cumulative Abnormal Return) and for investigating long- term effect by using BHAR (Buy and Hold Abnormal Return).

- **Data Envelopment Analysis (DEA)**

DEA is a non- parametric model introduced by Charnes et al. (1978), This approach is based on linear programming and uses a weighted measure of multiple inputs and outputs to calculate the relative efficiency of a group of DMUs (Hou et al., 2014). The effect of merger on operational efficiency of SBI analysed by using DEA.

3.1.8 Software used for the analysis

Following are the software programs used for the analysis;

- Microsoft Excel
- IBM SPSS Statistics 22
- Max DEA
- STATA

3.1.9 Period of the study

Secondary data

Four data sets have been used for the analysis. The first data set consists of ratios under CAMELS variables for analysing financial performance during the period 2013- 14 to 2021-22.

The second data set consists of data for analysing operating performance during the period 2012-13 to 2021 to 22.

The third data set contains share price of SBI and NSE indices for analysing short term shareholders effect for the period 1st January 2016 to 10th April 2017.

The fourth data set consists of data for analysing effect of merger on shareholders' wealth in long term for the period of 01-04-2012 to 30- 03-2022.

Primary data

primary data has been collected during the period 2018 to 2019 from SBI employees in Kerala.

3.1.9 Conclusion

The chapter provided the research methodology used for conducting the research. It contains research design, measurement of research instrument, scaling technique, pilot study, testing of reliability, validity and normality, tools for data analysis, software used and period for the study.

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CHAPTER 4

MERGERS & ACQUISITIONS IN INDIAN BANKING SECTOR: THEORETICAL FRAMEWORK

4.1 Introduction

There is a paradigm shift in the corporate world, from the expansion and diversification of businesses to the ever-increasing mergers and acquisitions. The Merger waves started in the year 1883 followed by the depression that ended that year. The first wave come, due to an economic expansion at that time. The initial movement was dominated few mega deals of corporate giants. Whereas now the entire picture is undergoing a sea change. Companies realised that mergers & acquisitions can enhance value of their business in this highly competitive, changing and challenging environment (Aurora et al., 2011).

Banking sectors are the backbone of every economy. Banks plays a vital role in the economic development of a country. Indian banking sector underwent a series of M&As as a mission to build stronger, bigger banks. The consolidation is pioneered since 1961.

4.2 Mergers, Acquisition & Restructuring

Corporate Restructuring refers to a broad range of activities that expand or contract a company's operations, change its financial structure, and change its ownership structure. Inter alia, it encompasses mergers, the acquisition of business units, takeovers, slump sales, demergers, and equity carve-outs. Typically, these activities are referred to collectively as mergers, acquisitions, and restructuring or just corporate restructuring (Chandra, 2017). M&A is an integral part of the corporate finance world. Investment bankers arrange M&A transactions every day to bring together companies in order to form a larger one (Whitaker, 2012).

➢ **Definition of Merger& Acquisitions**

A definition of mergers and acquisitions according to Arnold (2013). “Mergers are ‘the combining of two business entities under a common ownership’. The term for mergers and acquisitions is used interchangeably but acquisitions can be described as the coming together of roughly equal sized firms on roughly equal terms in which share- holders remain as joint owners. A takeover on the other hand is, ‘the process whereby an acquiring firm makes a bid for a target company’. These terms will be used interchangeably throughout and will be referred to as ‘mergers.”

The term Merger and Acquisition are often used interchangeably, it is essential to understand the differentiation between two (Sherman, 2011). A merger is an amalgamation of two companies into a new one, whereas an acquisition refers to the purchase of one company by another without creating a new one (Whitaker, 2012). David L. Scott in Wall Street Words: An A to Z Guide to Investment Terms for Today’s Investor, provided technical definition of the words is as follows:

- **Merger**

“A combination of two or more companies in which the assets and liabilities of the selling firm(s) are absorbed by the buying firm. Although the buying firm may be a considerably different organization after the merger, it retains its original identity.”(Scott, 2003)

- **Acquisition**

“The purchase of an asset such as a plant, a division, or even an entire company.”(Scott, 2003).

4.3 Motives for Mergers and acquisitions

Investment bankers, academicians and management consultants formulated different theories of motives for mergers and acquisitions, which try to explain the justification for M& As.

Theoretical framework for motives of M& A

Experts have formulated theories on the motives of Merger and acquisitions. They are:

1. Mergers and acquisitions are resulted by logical business decisions that benefit the shareholders of company through
   (a) The Efficiency Theory
   (b) The Monopoly Theory and
   (c) The valuation Theory.
2. The Empire Building Theory
3. The Process Theory.
4. The Disturbance Theory(Ghosh Ray, 2010).

The Efficiency Theory

The ultimate goal of mergers and acquisition is to make synergy. By merger, a company should have the capability to improve overall efficiency, which was not capable before the merger. Which means the costs are reduced when both the companies use, for example, the same production facility. Synergies can be obtained in three ways:(Ghosh Ray, 2010)

1. Financial synergies

"Financial synergy refers to the reduction in the acquirer's cost of capital due to a merger or acquisition" (DePamphilis & Donald, 2014).

2. Operating synergies

Operational synergies, typically generated by the combination of distinct functional areas within the new business, such as the combination of two production sites. Another form of operational synergy is information transfer, which increases as several corporate divisions combine their skills and expertise. The ability to innovate may also improve if more corporate expertise is gathered in one place (Ghosh Ray, 2010).

3. Management synergies

Management synergies that result from the management of the company making the purchase possessing skills that can support the effective organisation of processes in the target company or vice versa (Ghosh Ray, 2010).

➨ **The Monopoly Theory**

Classical economic theory of monopolisation viewed, companies agree to horizontal mergers to achieve market strength, to limit the competitors' power and make them more difficult to access the market. Monopolistic market position's positive effect can be acquired by:

1. Cross- subsidisation of acquired business lines.

The cross-subsidization of single business lines enables a product's strong position in a particular market to be leveraged to finance expansion in other markets.

2. An acquisition can restrict competition in markets where a company becomes a participant.

Acquisition can result in simultaneous restriction of competition in several markets by introducing two competing companies in the most important market of the other company.

3. Implementation or augmentation of entry barriers in specific markets.

The purpose of constructing market entry barriers is to prevent potential competitors from entering the respective market, and this can be accomplished through acquisition of market competitors in adjacent markets(Ghosh Ray, 2010).

➨ **The Valuation Theory**

The corporate or business values are being speculated when a merger or acquisition take place. The investors are looking for purchase companies whose products are undervalued in the market, to increase their values. The increase in the corporate value directly linked to shareholder value addition. This theory describes that the decision of acquisition or invest in other company is a pure investment decision and it will be reflected in shareholders' value addition(Ghosh Ray, 2010).

➨ **The Empire Building Theory**

According to empire building theory, the management with high expectation and interest which lead to pay a higher price for acquisition(Ghosh Ray, 2010).

The Empire Building Theory states that mergers and acquisitions are beneficial to the managers of acquiring corporations.

➨ **The Process Theory**

Complex decision-making processes lead to mergers. The decision-makers' ability to plan and anticipate these processes to a certain extent is restricted, therefore the stakeholders must find a balance between competing interests that will hold throughout the process (Ghosh Ray, 2010).

➨ **The Disturbance Theory**

Periodic waves of mergers are brought on by cyclical economic trends and events (such as shifts in commodity prices or the consequences of globalisation). Macroeconomic shocks or disruptions alter the management's mindset and expectations, resulting in a more unpredictable economic climate. A corporation must therefore decide whether to sell its ownership interest in another company and examine the potential of an acquisition (Ghosh Ray, 2010).

4.4 Determinants of Mergers& Acquisition

Major determinants of M&As are follows;

Synergy

"Synergy is the value realized from the incremental cash flows generated by combining two businesses"(DePamphilis & Donald, 2019). There are two types of synergy; operating and financial.

Operating synergy

Operating synergy contains economies of scale, economies of scope and the acquisition of complementary assets and skills, which can be leads to shareholders wealth creation (DePamphilis & Donald, 2019).

Financial synergy

"Financial synergy refers to the reduction in the acquirer's cost of capital due to a merger or acquisition"(DePamphilis & Donald, 2019).

Diversification

Diversification is when a company acquires companies outside its current lines of business. It may create financial synergy that declines the cost of capital (DePamphilis & Donald, 2019).

Strategic Realignment

M&A helps firms adapt to changes in their external environments such as regulatory changes and technological advancement. Acquire the capability to adapt more quickly to environmental changes than could be achieved internally. (DePamphilis & Donald, 2019).

4.5 Bank Merger

Bank merger is an event when previously distinct banks are consolidated into one institution (Pilloff & Santomero, 1996). A merger occurs when an independent bank loses its charter and becomes a part of an existing bank with one headquarter and a unified branch network (Dario, Farcarelli 2002). Merger occurs by adding the target (passive) bank’s assets and liabilities to the bidder (active) bank’s balance sheet and acquiring the bidder’s bank name through a series of legal and administrative measures. Generally, it has been seen that the bidder bank is big in size and target bank is smaller and facing some problems like poor performance, financial or structural. Mergers are deals that involve the full integration of bidder and target bank. In case of India, in legal terms mergers are known as amalgamations.

4.6 Mergers & Acquisitions in Indian Banking sector

The banks and financial institutions are core component of any financial system. In India, the banking sector is a key part of the economy, and it is sound, well capitalized, and regulated (Kuriakose & Paul, 2016). Banking is the heart of India's financial services sector. Over the past few years, the banking industry has undergone numerous changes to meet international banking standards (*IBEF*, 2022). As per the RBI, India’s banking sector is sufficiently capitalised and well- regulated. The country’s financial and economic conditions are far superior to any other country in the world. According to credit, market and liquidity risk studies, Indian banks are generally resilient and have weathered the global downturn well. The Indian banking system consists of 12 public sector banks, 21 private sector banks, 44 foreign banks, 43 regional rural banks, 1,484 urban cooperative banks and 96,000 rural cooperative banks in addition to cooperative credit institutions. As of September 2022, the total number of ATMs in India reached 217,308 out of which 49.81% are in rural and semi urban areas (*IBEF*, 2022).

Indian banking sector underwent a series of M&As as a mission to build stronger, bigger banks. The history of mergers and acquisitions in Indian banking can be traced back to 1921 when the Bank of Bengal, the Bank of Bombay, and the Bank of Madras amalgamated to form Imperial Bank of India. But after that few mergers have taken place. The consolidation is pioneered since 1961. The banking and financial institutions of India have made remarkable progress since 1961 in terms of geographical reach and functional reach. However, the system's financial health and productivity have deteriorated due to distorted loan and portfolio quality and political interference. The restructuring of the banking system has therefore been addressed by various committees. It was suggested by all committees that the banking system could be restructured through mergers and amalgamations. In addition to legal efforts, the second report of the Narasimham Committee on banking sector reforms recommends the following: "Mergers between banks and DFIs (Development Financial Institutions) and NBFCs (Non- Banking Financial Institutions) need to be based on synergies and locational and business specific complementariness of the concerned institutions and must obviously make second commercial sense."

Table 4.1 lists all the banks that were merged or amalgamated under section 45 of the Banking Regulation Act, 1949. There were 21 voluntary mergers from 1961 to the pre-liberalization period, 18 of which were with the State Bank of India or its associates. The phenomenon of mergers and acquisitions among Indian banks is not limited to the post-reform era.

Table 4.1

Bank mergers since 1961 to pre- liberalization period.

Year of merger	Target bank	Bidder bank
1961	Prabhat Bank Ltd.	National Bank of Lahore Ltd.
1961	Indo-Commercial Bank Ltd.	Punjab National Bank Ltd.
1961	Bank of Nagpur	Bank of Maharashtra
1961	Phaltan Bank	Sangli Bank
1961	Peoples Bank Ltd.	Syndicate Bank
1961	Partap Bank Ltd.	Lakshmi Commercial Bank Ltd.
1961	Bank of Citizen Bank Ltd.	Canara Banking Corporation Ltd.
1962	Unity Bank Ltd.	State Bank of India
1963	Bank of Algapuri Ltd.	Indian Bank
1964	Southern Bank Ltd.	United Industrial Bank Ltd.
1964	Thiya Bank Ltd.	Lord Krishna Bank Ltd.
1964	Bareilly Bank Ltd.	Beneras State Bank Ltd.

Year of merger	Target bank	Bidder bank
1965	Maland Bank Ltd	State Bank of Mysore
1968	Amrit Bank Ltd.	State Bank of Patiala
1969	Chawla Bank Ltd	New Bank of India
1969	Bank of Bihar	State Bank of India
1970	National Bank of Lahore	State Bank of India
1971	Eastern Bank	Charted Bank
1974	Krishnaram Baldeo Bank Ltd.	Bank of India
1976	Belgaum Bank	Union Bank
1985	Lakshmi Commercial Bank	Canara Bank
1985	Bank of Cochin	State Bank of India
1986	Miraj State Bank	Union Bank
1986	Hinustan Commercial Bank	Punjab National Bank
1988	Traders's Bank Ltd.	Bank of Baroda
1989	United Industrial Bank	Allahabad Bank
1989-90	Bank of Tamilnad	Indian Overseas Bank
1989-90	Bank of Thanjayur	Indian Bank
1989-90	Parur Central Bank	Bank of India
1990	Purbanchal Bank	Central Bank

Source: Compiled from the "Merger Mantra," Frontline, Volume 21, Issue 21, October 09-22, 2004

After the liberalisation a rapid growth can see in the process of merger and acquisition in banking sector. In 1993, India's banking sector deregulated which brought a numerous reform in the sector. The Government of India prioritise to consolidate the public sector banks in the country to achieving working effects and to competitive internationally. In the Indian banking sector, M&A activity has increased since 2003, possibly as a result of increased competition and Basel II standards requiring banks to maintain a minimum capital adequacy ratio of 9%. Banks have reconsidered linking smaller, weaker institutions to bigger ones in order to build a stronger system. So, Banks have reconsidered linking smaller, weaker institutions to bigger ones in order to build a stronger system (Nagesh, 2022). Table 4.2 lists the bank mergers in post-liberalization period.

Table 4.2

Bank mergers in Indian Banking sector- Post liberalisation era

Merger year	Target bank	Acquirer
1993	New Bank of India	Punjab National Bank
1993	Bank of Karad Ltd.	Bank of India
1995	Kashinath Seth Bank	State Bank of India
1997	Punjab Co-operative Bank	Oriental Bank of Commerce
1997	Bari Doab Bank Ltd.	Oriental Bank of Commerce
1999	Sikkim Bank Ltd.	Union Bank of India
1999	Bareilly Co-operation Bank Ltd	Bank of Baroda
2000	Times Bank Ltd.	HDFC Bank Ltd.
2001	Bank of Madura	ICICI Bank
2002	ICICI Ltd.	ICICI Bank
2002	Banares State Bank Ltd.	Bank of Baroda
2003	Nedungadi Bank Ltd.	Punjab National Bank
2004	South Gujarat Bank	Bank of Baroda
2004	Global Trust Bank	Global Trust Bank
2005	Bank of Punjab Ltd.	Centurion Bank Ltd.
2006	Ganesh Bank of Kurandwad	Fedral Bank
2006	United Western Bank	IDBI Bank
2007	Lord Krishna Bank	Centurion Bank Punjab
2007	Sangli Bank	ICICI Bank
2007	Bharat Overseas Bank	Indian Overseas Bank
2008	Centurion Bank of Punjab	HDFC Bank
2008	State Bank of Saurashtra	State Bank of India
2009	Bank of Rajasthan	ICICI Bank
2010	State Bank of Indore	State Bank of India
2015	ING Vysya Bank	Kotak Mahindra Bank

Source: "Report on Trend and Progress of Banking in India" Various issues, RBI

4.7 Merger& Acquisition of State Bank of India & its Associates

State Bank of India (SBI) is an Indian multinational, public sector banking and financial company, statutory body headquartered by Mumbai, Maharashtra. The bank is the oldest commercial bank in the Indian subcontinent and can trace its roots back to British India through the imperial bank of India and the establishment of the bank of Calcutta in 1806.

"Founded in 1806, Bank of Calcutta was the first Bank established in India, and over a period of time, evolved into State Bank of India (SBI). SBI represents a sterling legacy of over 200 years. It is the oldest commercial Bank in the Indian subcontinent, strengthening the nation's trillion-dollar economy and serving the aspirations of its vast population"(*SBI Annual Report*, 2017).

SBI is the India's largest commercial Bank in terms of assets, deposits, branches, number of customers and employees and enjoying the continued trust of millions of people.

SBI being the largest and oldest bank in India, had undertaken a number of acquisitions from time to time. Its origins can be traced back to British India, when Bank of Bengal, Bank of Madras and Bank of Bombay merged to form Imperial Bank of India in 1921, which became the State Bank of India in 1955. In 2008, State Bank of Saurashtra was merged with SBI, and in 2010, State Bank of Indore was merged with SBI.

On 1st April 2017, banking behemoth SBI merged its remaining 5 associates banks namely, State Bank of Travancore, State Bank of Patiala, State Bank of Bikaner and Jaipur, State Bank of Hyderabad and State Bank of Mysore along with Bharatiya Mahila Bank. It is considered as the ever-largest merger in Indian banking sector. This merger is considered as the mile stone of Indian banking history. The merger aimed at making bigger, better and stronger new SBI and to reach at the league of global banks.

Table 4.3 Provides the process of forming of SBI.

Table 4.3

List of banks that have merged to form the State Bank of India

Sl. No.	Name of the bank	Year of founding	Year of closing	Fate	Headquarters
1.	The Madras Bank	1683	1843	Merged with the Carnatic Bank, The British Bank of Madras (1795), and the Asiatic Bank to form the Bank of Madras in 1843	Madras Presidency
2.	Carnatic Bank	1788	1843	Merged with the Madras Bank, The British Bank of Madras (1795), and the Asiatic Bank to form the Bank of Madras in 1843	Madras Presidency
3.	The British Bank of Madras	1795	1843	Merged with the Madras Bank, The Carnatic Bank, and the Asiatic Bank to form the Bank of Madras in 1843	Madras Presidency
4.	The Asiatic Bank	1804	1843	Merged with the Madras Bank, The Carnatic Bank, and the British Bank of Madras to form the Bank of Madras in 1843	Madras Presidency
5.	The Dacca Bank	1846	1862	Merged with the Bank of Calcutta in 1862	Dhaka
6.	Bank of Calcutta	1806	1921	merged with the Bank of Bombay and Bank of Madras in 1921 to form the Imperial Bank of India	Calcutta
7.	Bank of Bombay	1840	1921	merged with the Bank of Bombay and Bank of Madras in 1921 to form the Imperial Bank of India	Bombay
8.	Bank of Madras	1843	1921	merged with the Bank of Bombay and Bank of Madras in 1921 to form the Imperial Bank of India	Madras Presidency

Sl. No.	Name of the bank	Year of founding	Year of closing	Fate	Headquarters
9.	Alliance Bank of Simla	1874	1923	Merged with the Imperial Bank of India in 1923	Shimla
10.	Imperial Bank of India	1921	1955	Renamed as the State Bank of India in 1955	India
11.	State Bank of Saurashtra	1925	2008	Merged with the State Bank of India in August 2008	Gujarat
12.	State Bank of Indore	1920	2010	Merged with the State Bank of India in August 2010	Indore
13.	State Bank of Mysore	1913	2017	Merged with the State Bank of India on 1 April 2017	Bangalore
14.	State Bank of Patiala	1917	2017	Merged with the State Bank of India on 1 April 2017	Patiala
15.	State Bank of Hyderabad	1941	2017	Merged with the State Bank of India on 1 April 2017	Hyderabad
16.	State Bank of Travancore	1945	2017	Merged with the State Bank of India on 1 April 2017	Trivandrum
17.	State Bank of Bikaner& Jaipur	1963	2017	Merged with the State Bank of India on 1 April 2017	Rajasthan
18.	Bharatiya Mahila Bank	2013	2017	Merged with the State Bank of India on 1 April 2017	India

Sources: 1. Shrivastava, Mohan Prasad (2007). Banking Reforms and Globalisation
2. "Reserve Bank of India - Museum". rbi.org.in.
3. https://rbidocs.rbi.org.in/rdocs/content/PDFs/90028.pdf

4.7.1 Major reasons behind merger of SBI and its associates

- Upgrade the position of SBI to the league of top 50 Banks in terms of Assets.
- Decreasing unhealthy competition among public sector Banks (PSBs).
- Reducing level of NPA
- Robust financial health
- Better scale efficiency

Figure 4.1

Merger of SBI

Source: SBI Annual Report 2016-17

4.7.2 SBI: An enduring Value Creator

Figure 4.2

SBI: An enduring Value Creator

Source: SBI Annual Report 2016-17

"From a business perspective, this consolidation will provide significant long-term benefits to the Bank. Through this merger, we have significantly extended our reach, and network and will benefit from common treasury pooling". "This merger has catapulted SBI, India's largest lender, into one of the Top 50 global banks". "At SBI, we believe that the long-term benefits of the merger will significantly outweigh the near-term challenges. The resulting cost advantage; enhanced reach; and economies of scale from this merger, will help SBI sustain its mission of being an enduring value creator"(*SBI Annual Report*, 2017).

The journey of merged SBI is continuing and it crossed five years. SBI's journey through numbers is shown in figure

Figure 4.3

SBI's Journey through numbers

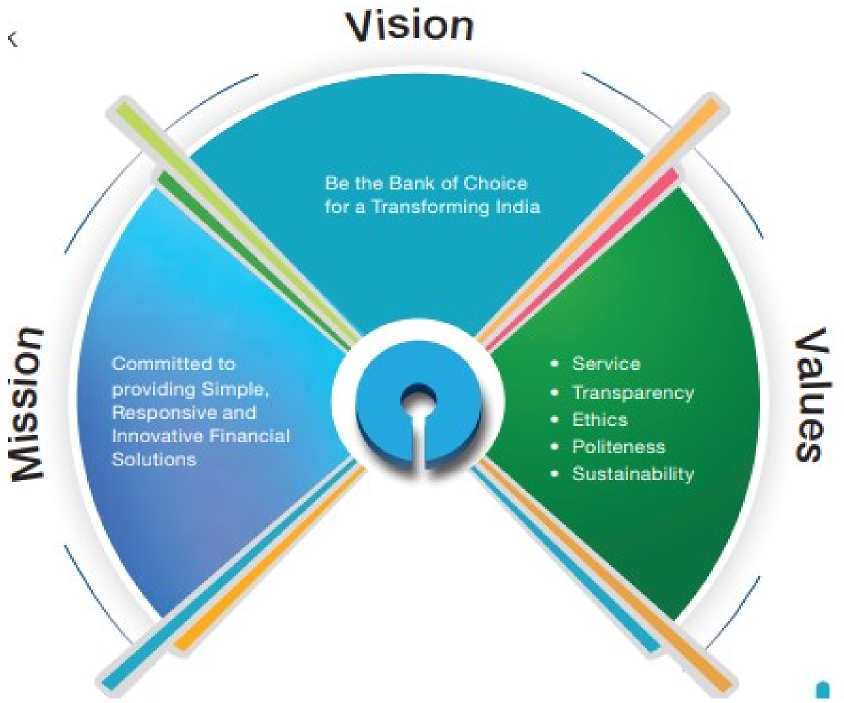
SBI's Journey through Numbers

46.77 cr. Customers	68,016 BC Outlets	19,500 SWAYAMS (Bar code based Pass book printing Kiosks)
22,266 Branches	27.58% Market Share in Debit Card Spends	15.15% Market Share in no. of POS
95.5% Share of Transactions on Alternate Channels	65,030 ATMs & ADWMs (Automated Deposit & Withdrawal Machines)	14.20 cr. Financial Inclusion Accounts (BC Channel)

Source: SBI Annual Report 2021-22

Figure 4.4

SBI's Vision, Mission& Values



Source: SBI Annual Report 2021-22

4.8 Recent Mergers and Acquisitions in Indian Banking sector

"Vijaya Bank and Dena Bank were merged with the Bank of Baroda with effect from April 1, 2019, to reap the benefits of economies of scale and resulting synergies. With effect from April 1, 2020, 10 PSBs were merged into 4 entities. Oriental Bank of Commerce and United Bank of India have been merged with Punjab National Bank to form the country's second-largest public-sector lender. Syndicate Bank and Canara Bank merged to create the fourth largest PSB. Andhra Bank and Corporation Bank have been merged into the Union Bank of India, forming the country's fifth largest PSB. Allahabad Bank was merged into Indian Bank"(*Reserve Bank of India - Trend and Progress of Banking in India*, 2020).

"Ten public sector banks were merged into four banks with effect from April 1, 2020 with the objective of creating next generation banks with strong national and global presence"(Report on Trend and Progress of Banking in India 2019-20).

"The Government of India has been facilitating consolidation of public sector banks (PSBs) through mergers over the last few years. In the Union Budget for 2021-22, the government announced its intent to take up the privatisation of two PSBs. Convergence is required between PSBs and private sector 3 NBFCs covered by Rule 4 of the Companies (Indian Accounting Standards) Rules, 2015. Report on Trend and Progress of Banking in India 2021-22 banks (PVBs) on corporate governance practices as well as managerial and operational flexibility. Going forward, this will generate the requisite space for both PSBs as well as PVBs to expand their business and thrive"(*Reserve Bank of India - Trend and Progress of Banking in India*, 2022).

4.9 Conclusion

The chapter gives a theoretical overview of merger& acquisitions in Indian Banking sector from pre-liberalisation period to till now. The consolidation of banks through mergers and acquisitions constitutes an important outcome of the financial transformation process and a contemporary trend in the Indian banking sector (Kuriakose & Paul, 2016).

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CHAPTER 5

EFFECT OF MERGER OF SBI ON THE FINANCIAL PERFORMANCE AND OPERATIONAL EFFICIENCY

5.1 Introduction

The journey of Merged SBI has been continuing and it completed five years. The stakeholders looking for the effect of merger on the financial performance and operational efficiency of bank. They want to know, whether the bank improved its financial performance and operational efficiency after the merger. So, this chapter analyse the effect of merger on the financial performance and operational efficiency of SBI.

5.2 Effect on the financial performance

The major determinants behind the merger of SBI and its associates are improving financial health, better scale efficiency and reduce level of NPA. The merger took place on 1st April 2017, with the promise by the ministry and management of bigger, better, stronger new SBI. Bigger in terms of size, better in terms of customers and stronger in terms of balance sheet size. The banking sector is one of the key building blocks of the financial system. A failure in the banking sector results serious problems in country's financial system(Yildirim & Ildokuz, 2020). This move of SBI merger was the largest merger in the history of Indian Banking sector. It's been 5 years since the merger; hence a study is needed to measure the financial performance of bank after the merger. In this chapter researcher analyse the effect of merger on the financial and operating performance of SBI. The aim of this study is to answer the following question; do the acquiring bank shows better performance after the merger?

One of the important obstacles in measuring the post- merger performance is that the acquired firms cease to exist and hence no data available after the merger. The standard method of dealing with this obstacle in merger research is comparing the combined entity's performance before and after the merger, and/or by comparing it with firms in similar industries and sizes that were not absorbed(Kumar, 2009). Here chose the first approach, generally termed as “change model”. For comparing pre and post- merger performance, this study uses four years of data before the merger and four years after the merger. Merger year indicated as (T0), pre- merger years indicated as (T-1, T-2, T-3, T-4) and post- merger years as (T+1, T+2, T+3, T+4). To avoid the immediate effect of the merger event on variables data, the merger year(T0) is excluded from the analysis. The reason for this is that the year (T0) figures are affected by one-time merger costs incurred that year, so they are difficult to compare with the results for other years.

Here the study is conducted as a case study of the merger of SBI and its associates and complete years data taken for the analysis, the merger is happened in the year 2017 and by March 2022 it completed 5 years. The researcher taken the complete years data after the merger for the analysis and corresponding years in pre- merger period for the comparison. The period of study is from 2013-14 to 2021-22. Data collected from the annual reports of SBI, then calculated the ratios under each parameter of CAMELS model in the research period, then compute the average of pre- merger and post- merger period’s data. By finding the relative change the effect of merger on financial performance is analysed. Since the data is population there is no need for testing of hypotheses.

5.3 CAMELS Model

The financial performance of bank is measured through CAMELS model. CAMELS is an international rating system used by regulatory banking authorities to rate financial institutions. CAMELS is an acronym for six parameters, Capital adequacy(C), Asset quality(A), Management efficiency (M), Earnings quality(E), Liquidity(L) and Sensitivity to the market risk (S), to measure the banking and financial performance (Wanke et al., 2016). It is an extension of the CAMEL model that has been used in the USA since 1979 to judge the soundness of banks (Christopoulos et al., 2011; Roman & Şargu, 2013). CAMEL was later extended and used by supervisory authorities in different countries to assess banks' soundness and financial performance (Roman & Şargu, 2013). In 1996, out of the desire to emphasize risk, a sixth component "S" was added to the five components, leading to the

CAMELS approach, where "S" refers to sensitivity to market risk (Roman & Şargu, 2013). The IMF and the World Bank (2005) also recommend all six parameters for assessing the financial soundness of banks. Furthermore, the CAMELS approach groups the financial soundness indicators of the banking sector based on the six key areas of vulnerability(Roman & Şargu, 2013).

The CAMELS model taken for the study and their expected effect is shown in the following table.

Table 5.1

CAMELS model and expected effect on the likelihood of improvement in the bank's performance

Financial indicators (CAMELS)	Expected effect on the likelihood of improvement in the bank's performance.
1. Capital Adequacy	
a) Capital adequacy ratio% (Basel II)	Increase
b) Debt- equity ratio	Decrease
c) Total advances to total asset ratio	Increase
d) Government securities to total investment ratio	Increase
2. Asset Quality	
a) Net NPA Ratio	Decrease
b) Gross NPA ratio	Decrease
c) Total investment to total asset ratio	Increase
3. Management efficiency	
a) Total expenditure to total income ratio	Decrease
b) Credit Deposit Ratio	Increase
c) Total Asset Turnover Ratio	Increase
d) Profit per employee	Increase
e) Business per employee	Increase
4. Earning quality	
a) Dividend pay- out Ratio	Increase
b) Return on Asset	Increase
c) Return on Equity	Increase

Financial indicators (CAMELS)	Expected effect on the likelihood of improvement in the bank's performance.
d) Spread to Total Asset	Increase
e) Interest income to total income	Increase
f) Non-interest income to total income	Increase
5. Liquidity	
a) Cash to deposit Ratio	Increase
b) Government securities to total asset ratio	Increase
c) Total investment to total deposit ratio	Increase
d) Liquid asset to total asset ratio	Increase
e) Liquid asset to deposit ratio	Increase
6. Sensitivity	
a) Price earnings ratio	Increase
b) Beta	Decrease
c) Long term deposit to total deposit (%)	Decrease
d) Demand deposit to total deposit (%)	Decrease

Source: Compiled by researcher

5.3.1 Capital adequacy

Capital Adequacy refers to a bank's compliance with regulations regarding the proper maintenance of minimum capital funds in order to protect depositors' money. Having an adequate capital fund enables potential and existing depositors to materialize their risk perceptions about the bank. Major indicators of capital adequacy are Capital Adequacy Ratio, Debt- equity ratio, Total advances to total asset ratio and Government securities to total investment ratio.

5.3.1.1 Capital Adequacy Ratio (%) – Basel II

Capital Adequacy Ratio (CAR) is the ratio of a bank's capital in relation to its risk weighted assets and current liabilities. It is decided by central banks and bank regulators to prevent commercial banks from taking excess leverage and becoming insolvent in the process. High capital adequacy ratio indicates the bank is in a better position to deal with unexpected losses due to availability of adequate capital ("What Is Capital Adequacy Ratio? - The Economic Times," 2022).

Capital Adequacy Ratio = (Tier I + Tier II + Tier III (Capital funds)) /Risk weighted assets

The Basel III norms stipulated a capital to risk weighted assets of 8%. However, as per RBI norms, Indian scheduled commercial banks are required to maintain a CAR of 9% while Indian public sector banks are emphasized to maintain a CAR of 12%.

Table 5.2

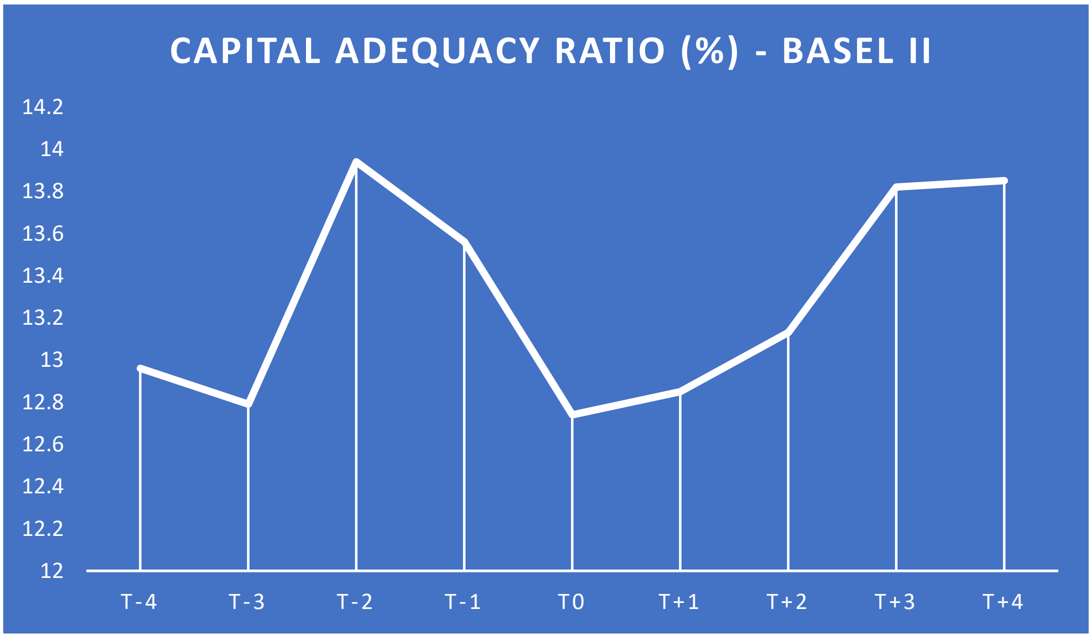
Capital Adequacy Ratios of SBI during pre and post-merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Capital adequacy	12.96	12.79	13.94	13.56	12.74	12.85	13.13	13.82	13.85	13.3125	13.4125	.75

Source: Annual Reports of SBI

Figure 5.1

Capital adequacy ratio (%)- Basel II



Source: Annual reports of SBI

While analysing the table and graph the trend of CAR from 2013-14 to 2021-22, noticed a trifling fluctuation in pre and post- merger phase. The CAR varies from 12.96 to 13.85 in the whole interpretation period. It is noticed that before the merger event the performance of capital adequacy ratio satisfies i.e., 13.94 and 13.56 respectively in the year 2015-16 and 2016-17, but after the merger it deteriorates in 2017-18 at 12.74 per cent but there after it shows an increasing trend and ultimately in 2021-22 it stands at 13.85 per cent. In this assessment, a huge increase in capital adequacy is not notable, which means a moderate change is noteworthy with average protection of depositors' money. Both pre and post-merger phase, capital adequacy ratios are higher than the standard ratio prescribed by Basel II and RBI guidelines, indicating that the bank is adequately capitalized.

5.3.1.2 Debt- equity Ratio

The debt-equity ratio is a measure of the relative contribution of the creditors and shareholders or owners in the capital employed in business. Simply stated, ratio of the total long-term debt and equity capital in the business is called the debt-equity ratio(“What Is Debt Equity Ratio? The Economic Times,” 2022). The debt-to-equity (D/E) ratio is a leverage ratio that shows how much a company's financing comes from debt or equity. A higher D/E ratio means that more of a company's financing is from debt versus issuing shares of equity. Banks tend to have higher D/E ratios because they borrow capital in order to lend to customers. They also have substantial fixed assets, i.e., local branches, for example (Maverick, 2021).

It can be calculated using a simple formula:

Debt-equity ratio= Total liablities/ Equity

A D/E ratio of 1.5 or lower is considered desirable, and a ratio higher than 2 is considered less favourable.

Table 5.3

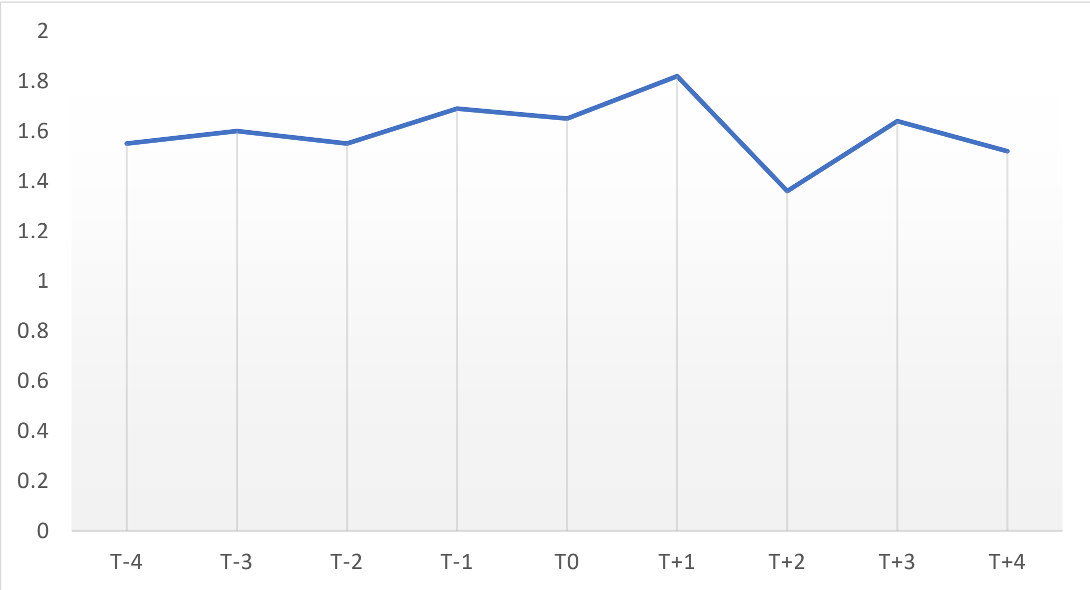
Debt- equity ratios of SBI in pre and post-merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Debt-equity ratio	1.55	1.60	1.55	1.69	1.65	1.82	1.36	1.64	1.52	1.598	1.585	-0.813

Source: Computed from the annual reports of SBI

Figure 5.2

Debt-equity Ratio



Source: Annual reports of SBI

From the table and figure it can be inferred that Debt- equity ratio reflects a change from 1.55 to 1.52. After the tie up phase a mere increase is shown in the year 2018-19, but later it tends to decrease to 1.36 in the year 2019-20. After that gradually increased to 1.64 in 2020-21 then down to 1.52 in the last financial year. The D/E ratio of SBI is desirable. After the merger period the ratio reduced by 0.813 per cent.

5.3.1.3 Total Advances to Total Assets Ratio

Total advances to total assets ratio indicate the relationship between the total advances and total assets. This ratio indicates a bank's aggressiveness in lending, which ultimately produces better profitability.

Table 5.4

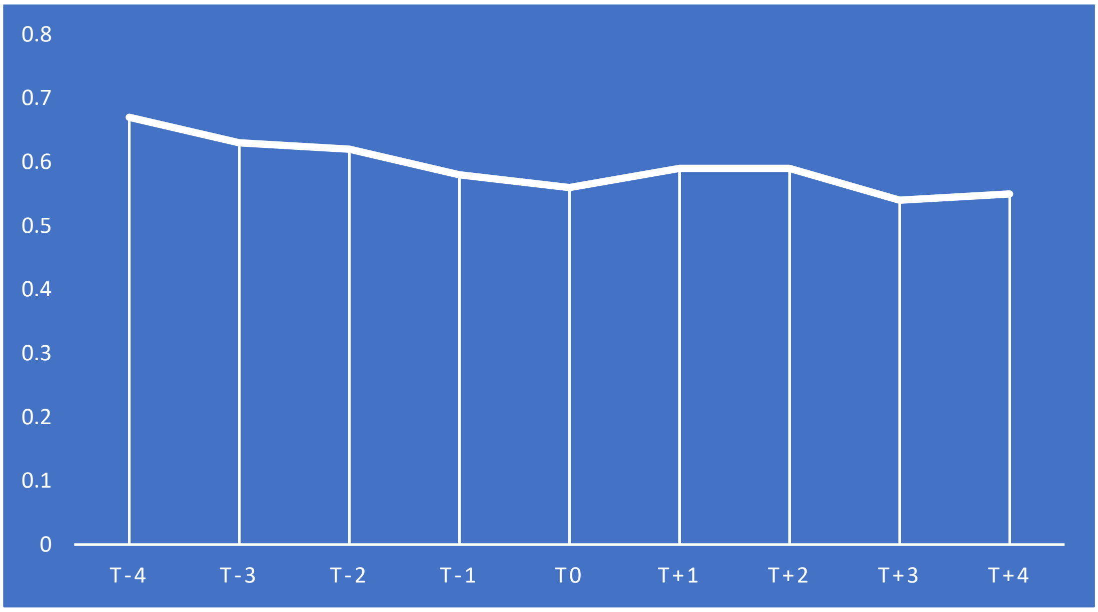
Total Advances to Total Asset Ratios of SBI during pre and post-merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Total advances to total assets ratio	0.67	0.63	0.62	0.58	0.56	0.59	0.59	0.54	0.55	0.625	0.568	-9.12

Source: Computed from Annual Reports of SBI

Figure 5.3

Total advances to total assets ratio



Source: Computed from Annual reports of SBI

A deteriorate trend has reflected in Total advances to total assets ratio from 2013-14 to 2021-22. In the year 2013-14 the ratio was .67 per cent, in the last financial year it reduced to .55 percent. The ratio reduced by 9.12 per cent in post- merger period. It reflects, the banks' submissive attitude to total advances out of total assets that they are not trying to earn extra money by giving out more advances.

5.3.1.4 Government Securities to Total Investment Ratio

It is calculated by dividing the amount invested in government securities by the total investment. Government Securities are treated as more safe but low return.

Table 5.5

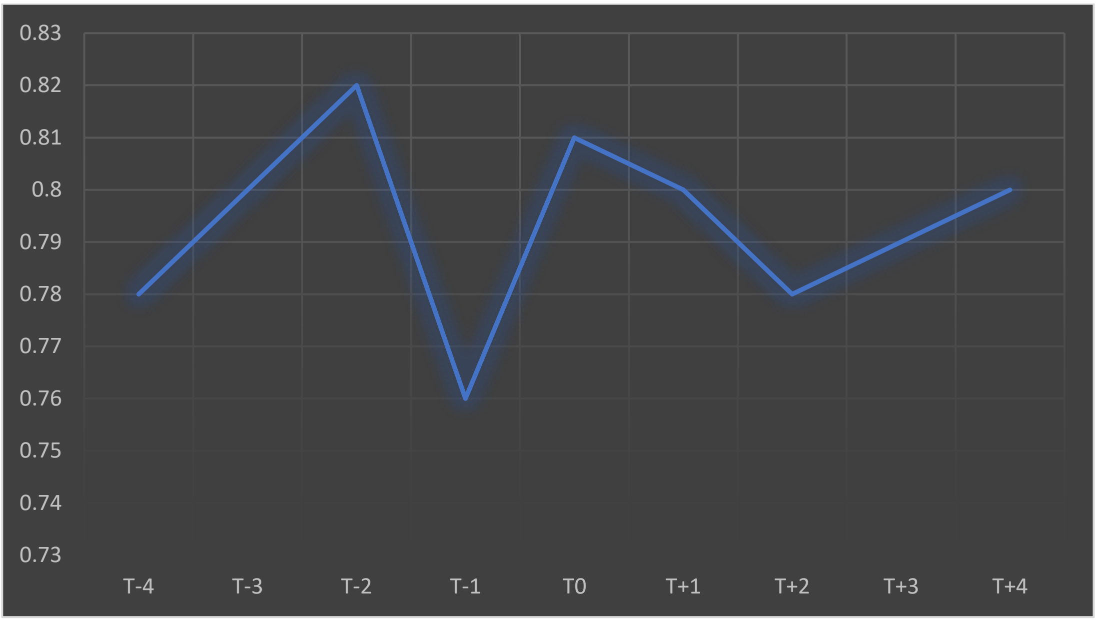
Government securities to total investment ratios of SBI during pre and post-merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Government Securities to Total Investment Ratio	0.78	0.80	0.82	0.76	0.81	0.80	0.78	0.79	0.80	0.79	0.793	0.34

Source: Computed from the Annual Reports of SBI

Figure 5.4

Government securities to total investment ratios of SBI



Source: Computed from the Annual Reports of SBI

The ratio of Government Securities to Total Investments, which analyzes the bank's risk-taking capacity, demonstrates very little variation here which is a good indication for depositors of the bank, as more investment in Government securities indicates maximum amount of investment in low risky investments and assets. In 2014-2015 it was 0.80, while at the time of consolidation event it stands at 0.76 and finally after the tie up deal it fluctuates from 0.81 to 0.80. A little positive change of 0.34 per cent can see in post-merger period. As reported, more investment in Government securities denotes maximum amount of investment in low risky investment and Assets.

5.3.2 Asset Quality

This is a measure of the quality of a loan that is issued by an institution which reflects the earnings of the institution. The assessment of asset quality involves assessing investment risk factors and balancing them against the bank's capital earnings. A bank's Asset Quality indicates its stability when faced with specific challenges. It is crucial for banks to maintain their asset quality, since the value of assets can quickly decline if they are invested or lent to high-risk endeavours. Generally, asset quality is assessed in terms of Non-Performing Assets and their severity. Popular indicators of asset quality consist Net NPA Ratio, Gross NPA Ratio and Total Investment to Total Asset Ratio.

5.3.2.1 Net NPA Ratio

As per the RBI's circular 2007 **"***When a loan advance stop generating income the bank then it is called a Non-Performing Asset (NPA)".* Net NPA ratio is the ratio of Net NPA to Net Advances in which the provisions are deducted from the gross advances. One of the objectives of merger is to reduce the level of NPA. NPA was the major obstacle of the financial institutions. A bank's foremost concern is to maintain a low level of non-performing assets since growing NPAs adversely affect the bank's profitability.

Net NPA Ratio= Net NPA/ Net Advances.

Table 5.6

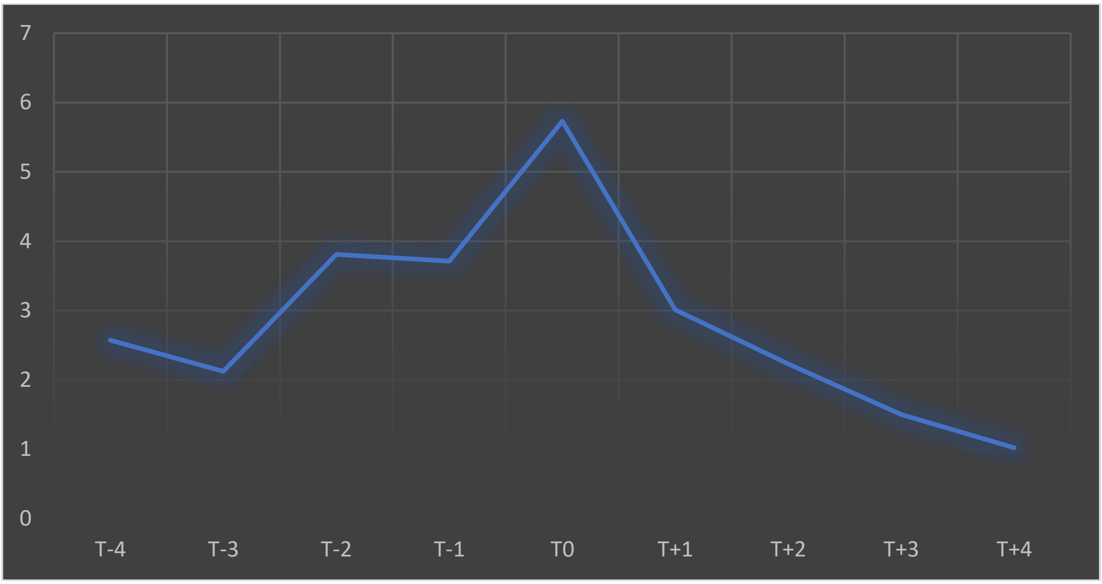
Net NPA ratios of SBI during pre and post- merger period

	T-4	**T-3**	**T-2**	**T-1**	**To**	**T+1**	**T+2**	**T+3**	**T+4**	**Pre-merger mean**	**Post-merger mean**	**% change**
Net NPAs to Net Advances (%)	2.57	2.12	3.81	3.71	5.73	3.01	2.23	1.50	1.02	3.05	1.94	-36.39

Source: Annual Reports of SBI

Figure 5.5

Net NPA Ratio



Source: Annual Reports of SBI

The table and figure depicted the Net NPA ratios of SBI during pre and post- merger period. Net NPA to net advance ratio changes from 2.57 per cent in 2013-14 to 1.02 per cent in 2021-22. It is noticed that just after the merger phase in 2017-18 the ratio has increased to 5.73 percent, it may be due to the merging of associate banks accounts. After that shows a downward trend from 3.01 in 2018-19 to 1.02 in 2021-22. One of the objectives of the merger is to reduce the level of NPA. The bank achieved its objective to reduce NPA through merger.

5.3.2.2 Gross NPA Ratio

Gross NPA Ratio is the ratio of Gross NPA to Gross Advances. The banks try to reduce the GNPA ratio.

Gross NPA Ratio= Gross NPA/ Gross Advances

Table 5.7

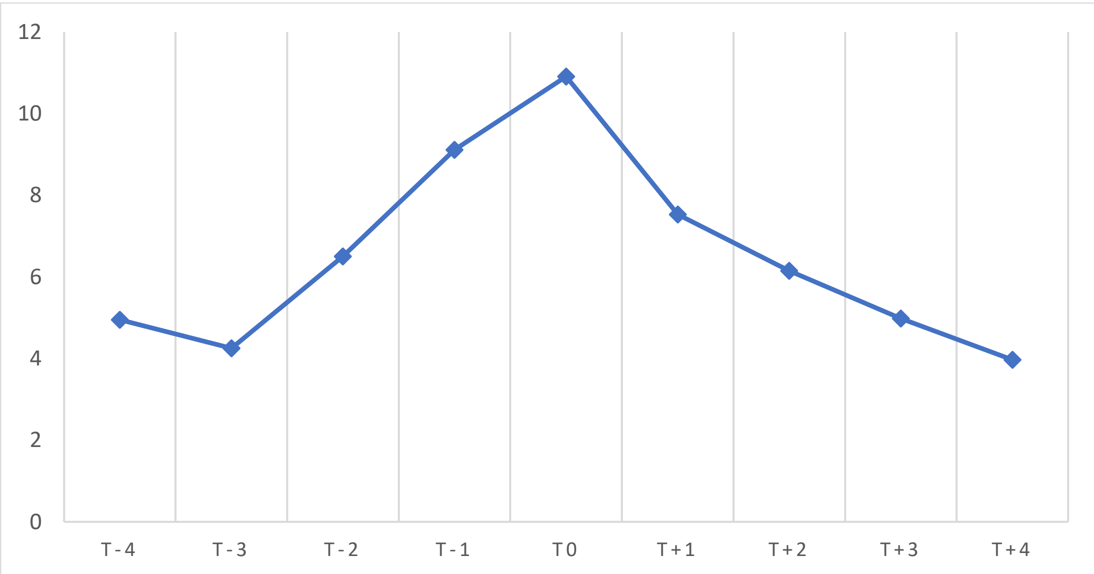
Gross NPA Ratios of SBI during pre and post- merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Gross NPA Ratio	4.95	4.25	6.50	9.11	10.91	7.53	6.15	4.98	3.97	6.20	5.66	-8.71

Source: Annual Reports of SBI

Figure 5.6

Gross NPA ratios of SBI



Source: Annual Reports of SBI

The gross NPA ratio depicts same picture like Net NPA to net advances ratio. After the tie up period gross NPA increased from 9.11 to 10.91 and thereafter it shows deterioration, it become 3.97 in 2021-22. This means the bank achieved its objective to reduce NPA through merger.

5.3.2.3 Total Investment to Total Assets Ratio (%)

Total Investment to Total Assets= Total Investment/ Total Assets

Table 5.8

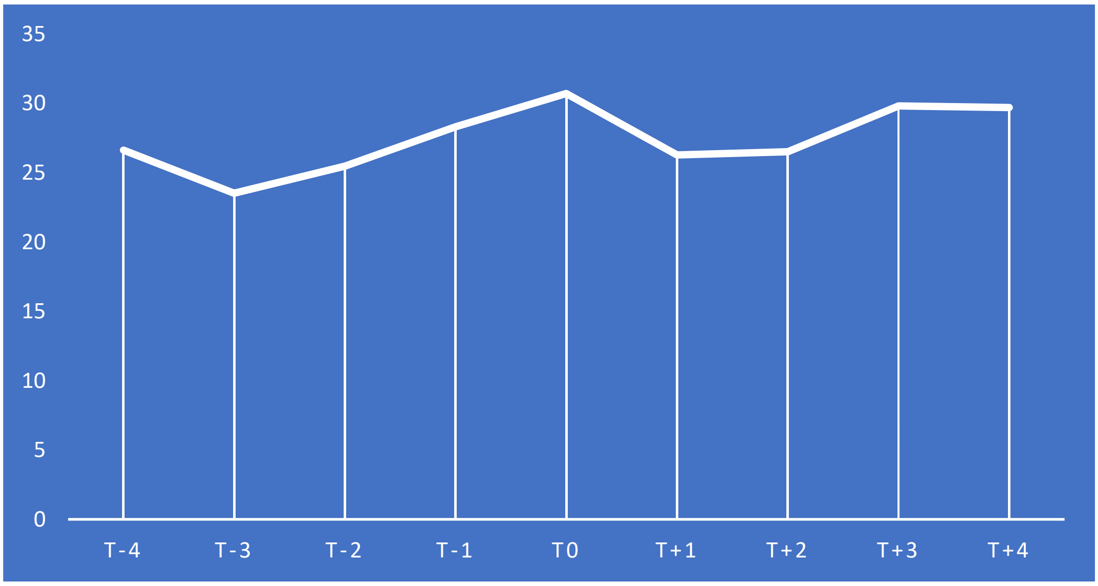
Total Investment to Total Assets ratios of SBI during pre and post-merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Total Investment to Total Assets Ratio (%)	26.62	23.52	25.48	28.31	30.71	26.27	26.50	29.81	29.70	25.98	28.07	8.04

Source: Computed from Annual Reports of SBI

Figure 5.7

Total Investment to Total Assets Ratios of SBI



Source: Computed from annual reports of SBI

From pre-merger to post-merger period, the report of Total Investment to Total Assets ratio have given satisfied result as just after the consolidation event firstly this ratio has enriched from 28.31 to 30.71, and in 2018-19 it stands at 26.27 & again after a bit enhancement in the coming years it become 26.50 in 2019-20. Again the ratio increased and it became 29.70 in the year 2021-22. This ratio indicates that the bank has kept a conservative buffer of investments to guard against non-performing assets (NPAs).

5.3.3 Management Efficiency

Management measures the efficiency of the organization in order to reduce costs, increase profits and prevent the possibility of it going into bankruptcy(Ledhem & Mekidiche, 2020). It refers to the ability of the management team to identify and categorize potential risks and also the ability of the management team to handle those risks when financial stress is an emerging phenomenon. Management efficiency can be analysed through ratios like Total expenditure to Total Income ratio, Total Advances to Total Deposit Ratio, Total Income to Total Asset Ratio, Profit per Employee and Business per Employee.

5.3.3.1 Total Expenditure to Total Income Ratio

It is important for every bank to control its expenditure since this is a crucial aspect that helps to increase the profits for the bank. In order to enhance its return to equity shareholders, it would be advisable to keep a close watch on its expenditures. This ratio gives a clear picture to investors how the efficiency of bank being run.

Total Expenditure to Total Income Ratio= Total Expenditure/ Total income

Table 5.8

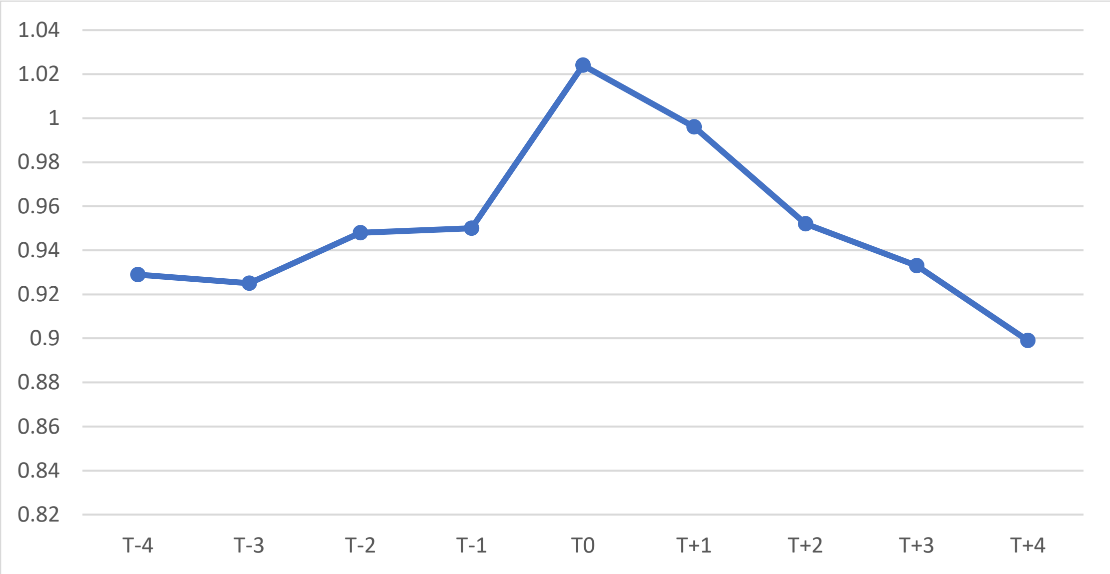
Total Expenditure to Total Income ratios of SBI during pre and post-merger period

	T-4	**T-3**	**T-2**	**T-1**	**To**	**T+1**	**T+2**	**T+3**	**T+4**	**Pre-merger mean**	**Post-merger mean**	**% change**
Total Expenditure to Total Income Ratio (%)	.929	.925	.948	.950	1.024	.996	.952	.933	.899	.938	.945	0.76

Source: Computed from Annual Reports of SBI

Figure 5.8

Total Expenditure to Total Income Ratio



Source: Computed from Annual Reports of SBI

From the table and graph we can analyse the trend of Total Expenditure to Total Income Ratio. It is clear that the ratio is showing a decreasing trend after the merger year. In the year 2021-22 the ratio is .899. The SBI could achieve to reduce the expenditure after the merger.

5.3.3.2 Total Advances to Total Deposit Ratio (Credit deposit Ratio)

A bank's advances-to-deposit ratio represents the amount it has lent from the funds mobilized as deposits. If the ratio is high, it indicates that lending is heavily reliant on deposits.

Credit Deposit Ratio= Total Advances/ Total Deposits

Table 5.9

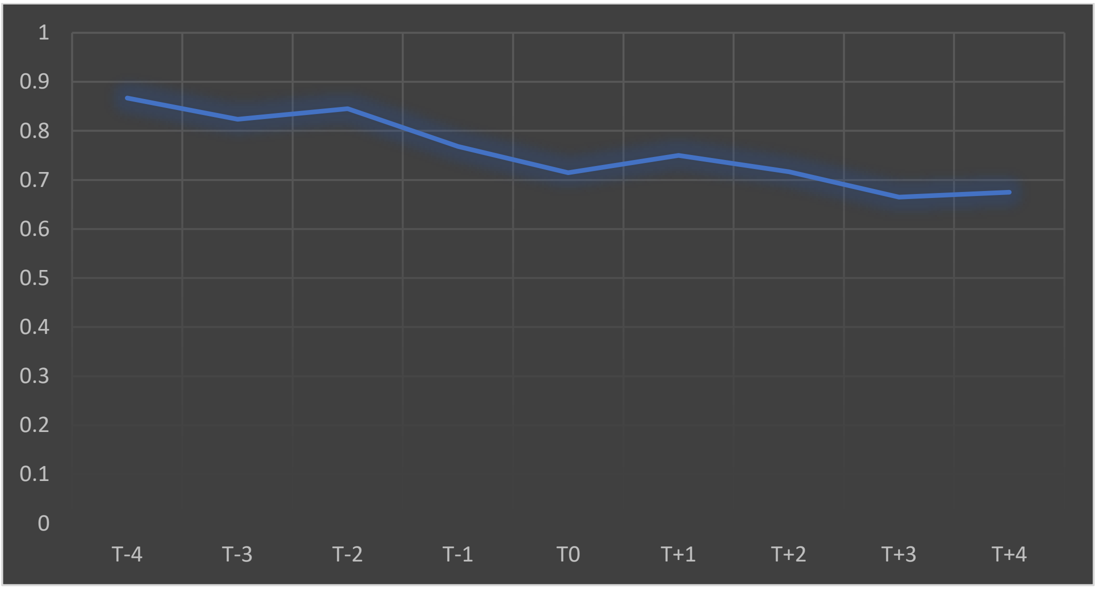
Credit Deposit Ratios of SBI during pre and post-merger period

	T-4	**T-3**	**T-2**	**T-1**	**To**	**T+1**	**T+2**	**T+3**	**T+4**	**Pre-merger mean**	**Post-merger mean**	**% change**
Total Advances to Total Deposit Ratio (%)	.867	.824	.845	.768	.715	.750	.717	.665	.675	0.826	0.702	-15.01

Source: Computed from Annual Reports of SBI

Figure 5.9

Total Advances to Total Deposit Ratios of SBI



Source: Computed from Annual Reports of SBI

The credit Deposit Ratio showing a down ward trend. The ratio is reduced by 15 percent after the merger period compared to pre- merger period. This unfavourable trend in Total Advances to Total Deposits indicates that the bank's management is less effective at turning available deposits into advances.

5.3.3.3 Total Asset Turnover Ratio (Total Income to Total Assets Ratio)

Asset turnover ratio calculates how rapidly a bank turns over its assets for income, both interest and non-interest income. It assesses a bank's capacity to effectively produce income from its assets.

Asset turnover Ratio= Total Income/ Total Assets

Table 5.10

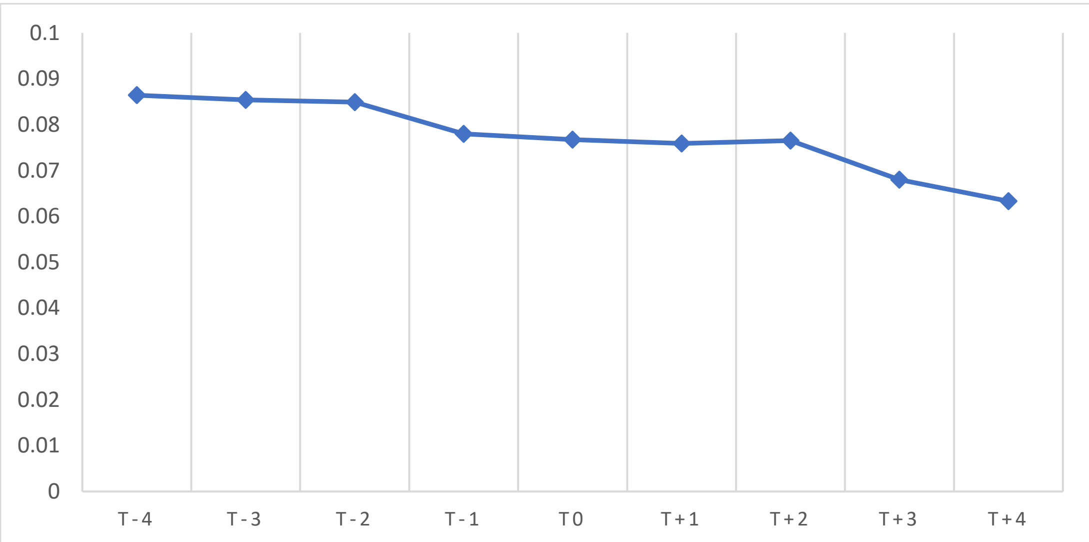
Total income to Total Assets ratios of SBI during pre and post- merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Total Income to Total Assets Ratio (%)	.0864	.0854	.0849	.0780	.0767	.0759	.0765	.0680	.0633	0.084	0.071	-15.48

Source: Computed from Annual Reports of SBI

Figure 5.10

Total Income to Total Assets Ratio



Source: Computed from Annual Reports of SBI

The table and figure depict the Total Assets Turnover ratio. The ratio showing a downward trend during the period. A fluctuation is seen in the ratio but after the merger SBI control the fluctuations to some extent because this ratio was 0.0767 in the merger year then in 2018-19 the ratio was 0.0759 and in 2019-20 the ratio was 0.0765. After that the ratio deteriorated and in 2021-22 it becomes 0.0633. A declining Total Income to Total Assets ratio implies Bank's ineffective asset management for earning profit.

5.3.3.4 Profit per Employee

This ratio shows how each employee contributes to the banks' profitability. Higher the ratio means more efficient.

Profit per Employee= Net Income/ Total number of employees

Table 5.11

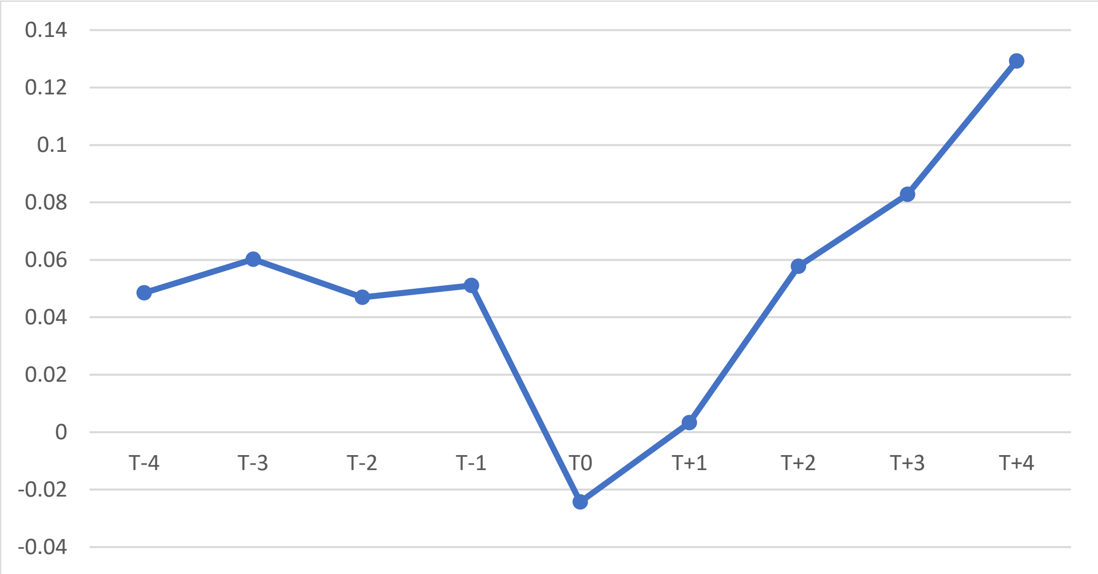
Profit per Employee o SBI during pre and post-merger period

	T-4	**T-3**	**T-2**	**T-1**	**To**	**T+1**	**T+2**	**T+3**	**T+4**	**Pre-merger mean**	**Post-merger mean**	**% change**
Profit per Employee (Cr.)	.0485	.0602	.047	.0511	-.0243	.0033	.0578	.0828	0.1292	0.052	0.068	30.77

Source: Annual Reports of SBI

Figure 5.11

Profit per Employee of SBI



Source: Annual Reports of SBI

The profit per employee reported a negative value i.e., -0.0243 in the year of merger, this signifies the merger effects on the efficiency of employees. The reason for declining employees' efficiency may be due to change in work environment after the merger. But later, Bank could increase the ratio at an increasing rate. Bank focuses on its management efficiency area, in 2018-19 the ratio was 0.0033 again in 2019-20 the ratio was .0578 and ultimately in 2021-22 it become 0.1292. The ratio was increased by 30.77 percent during the post- merger period.

5.3.3.5 Business per Employee

The ratio indicates the productivity of employees. It defines how well the employees of Bank are working.

Business per Employee= Total Business/ Total Number of employees

Table 5.12

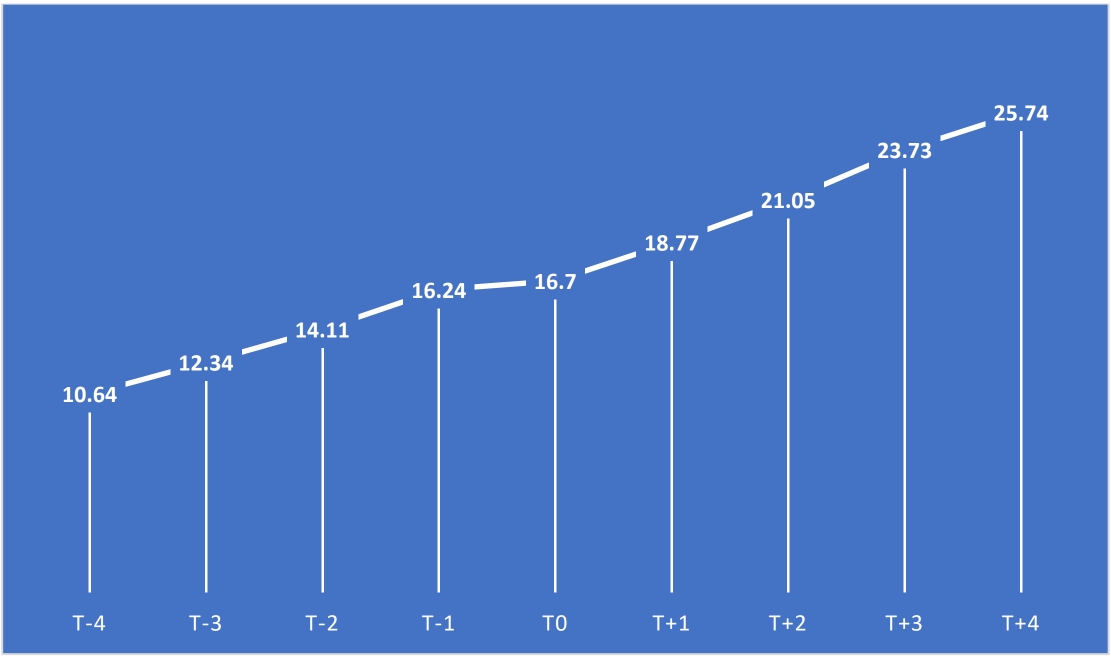
Business per Employee of SBI during pre and post- merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Business per Employee (Cr.)	10.64	12.34	14.11	16.24	16.70	18.77	21.05	23.73	25.74	13.33	22.32	67.44

Source: Annual Reports of SBI

Figure 5.12

Business per employee of SBI



Source: Annual Reports of SBI

Business per employee shows a positive sign, the ratio depicts an upward trend. It shows a favourable difference in pre and post-merger period that is from 10.64 to 25.74. This indicates that SBI has increased its business efficiency.

5.3.4 Earning Quality

Earning is a measure of profitability and there is an assessment of earnings and their level of relationship with peers in which the objective is to evaluate the effect of internally produced funds on the capital of the bank (Ledhem & Mekidiche, 2020). Worthy earning quality enable banks to foresee an ideal level of capitalization, deliver appropriate dividends to shareholders, and bear potential losses. The widely used measures of earning qualities are Dividend pay-out Ratio, Return on Asset, Return on Equity, Spread to Total Asset, Interest Income to Total Income and Non- interest Income to Total Income.

5.3.4.1 Dividend Pay-out Ratio (%)

"It defines the relationship between the returns belonging to the ordinary shareholders and the dividend paid to them, or the percentage share of Net profit is paid to ordinary shareholders as dividend" (Paul, 2009).

Dividend Pay-out Ratio= Dividend per Share (DPS)/ Earning per Share (EPS)

Table 5.13

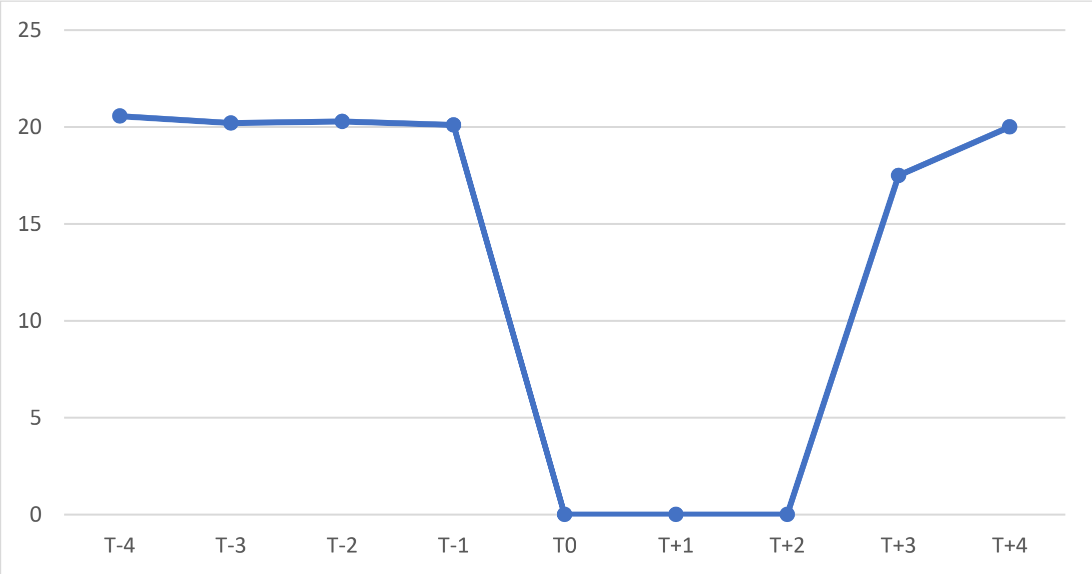
Dividend Pay-out Ratios of SBI during pre and post-merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Dividend Pay-out Ratio (%)	20.56	20.21	20.28	20.11	NA	NA	NA	17.49	20.00	20.29	9.37	-53.82

Source: Annual Reports of SBI

Figure 5.13

Dividend pay-out Ratios of SBI



Source: Annual Reports of SBI

The above table and graph exhibit the Dividend pay-out Ratios of SBI during pre-and post-merger period. The earning quality of SBI is adversely affected due to the merger, and due to negative earnings after merger, the bank has not paid any dividends to shareholders consecutively three years after the merger. After that the bank could better the ratio and in 2021-22 it become 20 percent.

5.3.4.2 Return on Asset (ROA) (%)

This ratio expresses the rate of return on total assets which are employed in a firm to earn profit.

Return on Asset = Earning before interest and tax/ Total Assets

Table 5.14

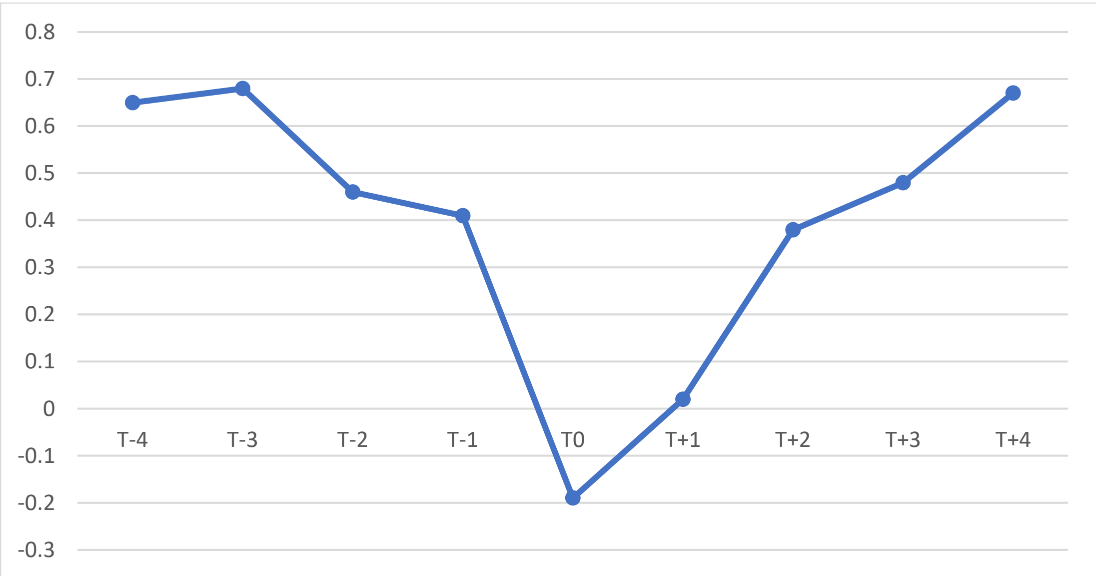
Return on Assets of SBI during pre and post-merger period.

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Return on Asset (%)	0.65	0.68	0.46	0.41	-0.19	0.02	0.38	0.48	0.67	0.55	0.39	-29.09

Source: Annual Reports of SBI

Figure 5.14

Return on Assets of SBI



Source: Annual Reports of SBI

The table and graph show the Return on Assets of SBI during pre and post- merger period. It is evident that the ratio is in a declining trend and in the year of merger it reports negative ROA of -0.19 percent. After that the ratio got improved and seen an increasing trend in the ratio and it became 0.67 percent in the year 2021-22.

5.3.4.3 Return on Equity (ROE) (%)

This ratio measures the bank's profitability and the efficiency of generating profit. The higher the ratio means the more efficient the bank's management in generating profit and growth from its equity financing.

Return on Equity= Net Income/ Average shareholders' equity

Table 5.15

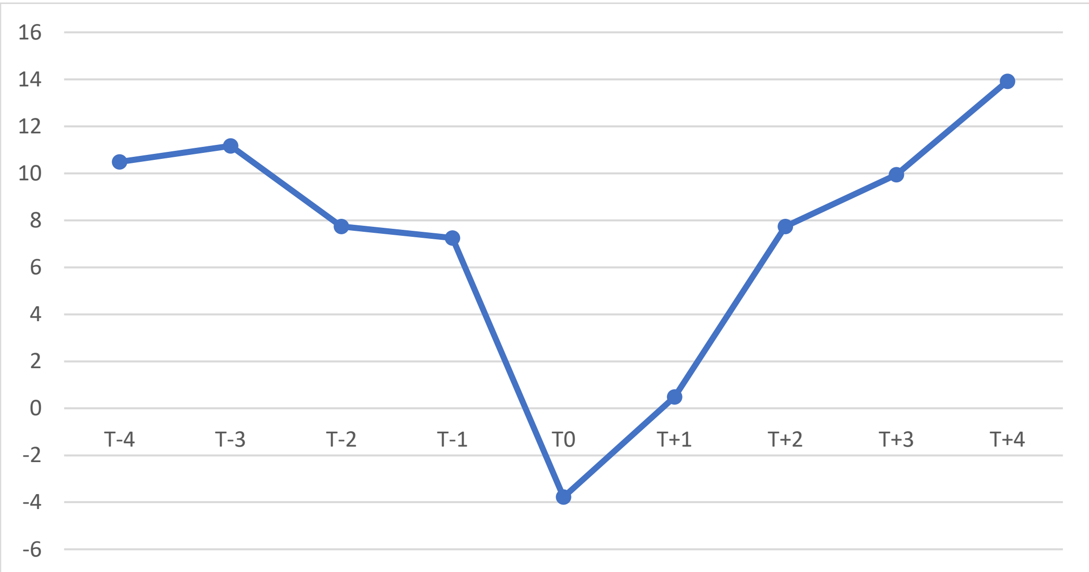
Return on Equity of SBI during pre and post-merger period.

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Return on Equity (%)	10.49	11.17	7.74	7.25	-3.78	0.48	7.74	9.94	13.92	9.16	8.02	-12.45

Source: Annual Reports of SBI

Figure 5.15

Return on Equity of SBI



Source: Annual Reports of SBI

The Return on Equity also exhibits like Return on Asset. SBI incurred a loss in the year of merger, so the ratio gives the negative report. SBI Could recover the loss soon and a great improvement can see in the ROE, in the year 2019-20 the ratio was 7.74 percent, again in the year 2020-21 the ratio was 9.94 percent and finally it became 13.92 percent in the year 2021-22. This indicates that despite SBI's failure to generate returns for its shareholders after merger, the bank has covered up its loopholes.

5.3.4.4 Spread to Total Assets (%)

$$\text{Spread to Total Assets} = \text{Spread/ Total Assets}$$

Table 5.16

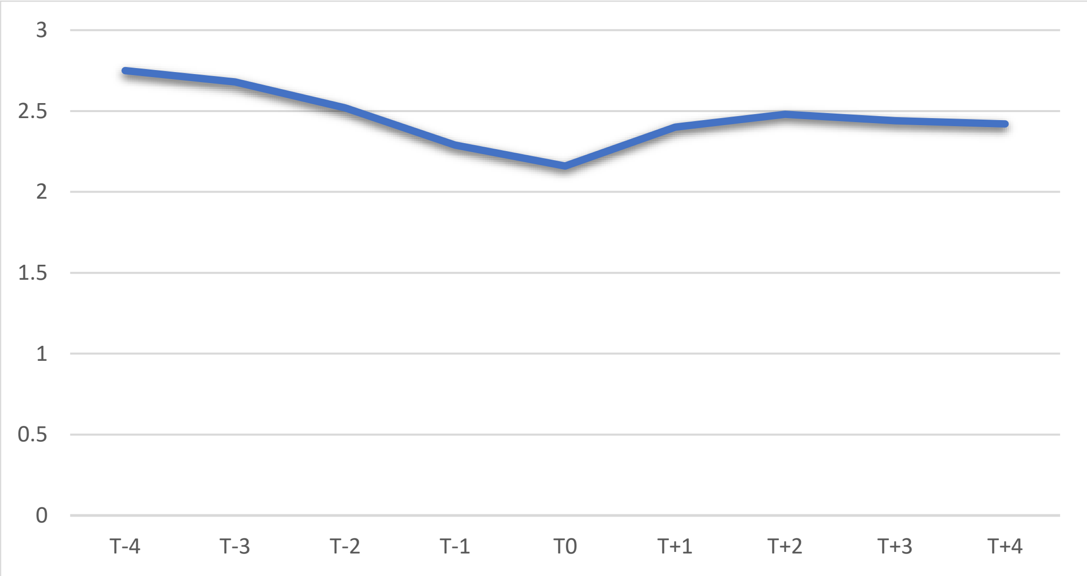
Spread to Total Assets Ratios of SBI during pre and post-merger period

	T-4	**T-3**	**T-2**	**T-1**	**To**	**T+1**	**T+2**	**T+3**	**T+4**	**Pre-merger mean**	**Post-merger mean**	**% change**
Spread to Total Assets (%)	2.75	2.68	2.52	2.29	2.16	2.40	2.48	2.44	2.42	2.56	2.44	-4.69

Source: Computed from Annual Reports of SBI

Figure 5.16

Spread to Total Assets Ratios of SBI



Source: Computed from Annual Reports of SBI

The Spread to Total Assets ratio shows very minor changes in post- merger phase compared to pre-merger phase.

5.3.4.5 Interest income to Total income (%)

The Bank's major source of income is the interest income. This ratio indicates how much part of total income comprised of interest income.

Interest income to Total income = Interest income/ Total income

Table 5.17

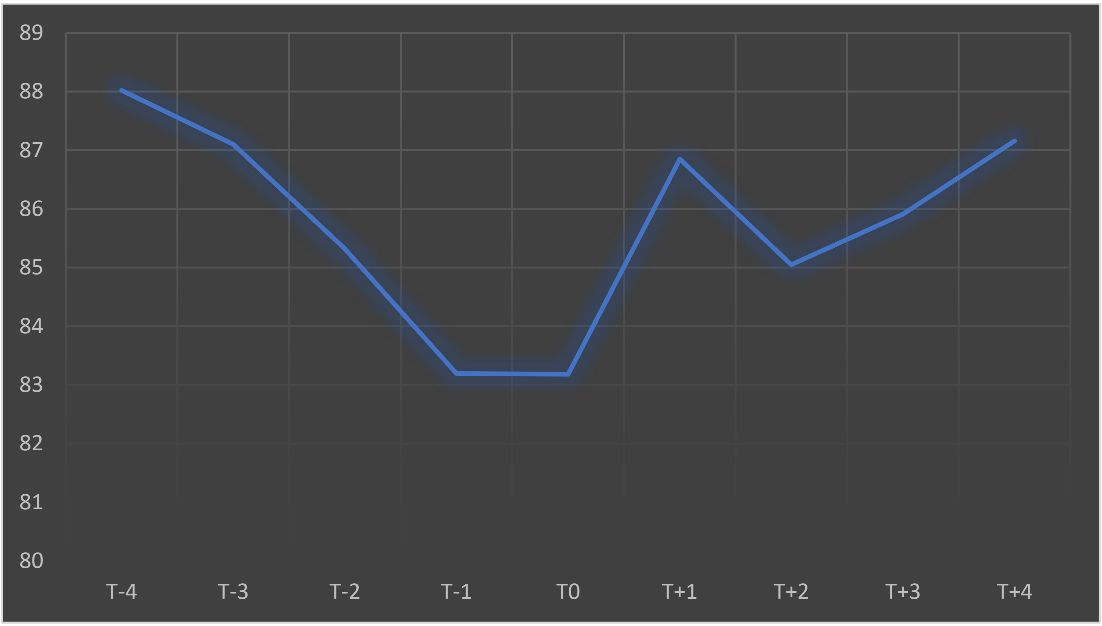
Interest income to Total income Ratios of SBI during pre and post- merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Interest income to Total income (%)	88.02	87.10	85.32	83.19	83.18	86.85	85.05	85.91	87.16	85.91	86.24	0.384

Source: Computed from the Annual Reports of SBI

Figure 5.17

Interest income to Total income Ratios of SBI



Source: Computed from the Annual Reports of SBI

Interest income to total income ratio shows a decrease in the year of merger, after that SBI improved the ratio in the year 2018-19 but again it reduced in the next year. Again, in the following years the ratio improved and became 87.16 percent in the year 2021-22. The merger contributes mere improvement in the interest income.

5.3.4.6 Non-Interest Income to Total Income (%)

This ratio gauge how much the contribution of non-interest income in the total income of the bank.

Non-interest income to Total income= non-interest income/ Total income

Table 5.18

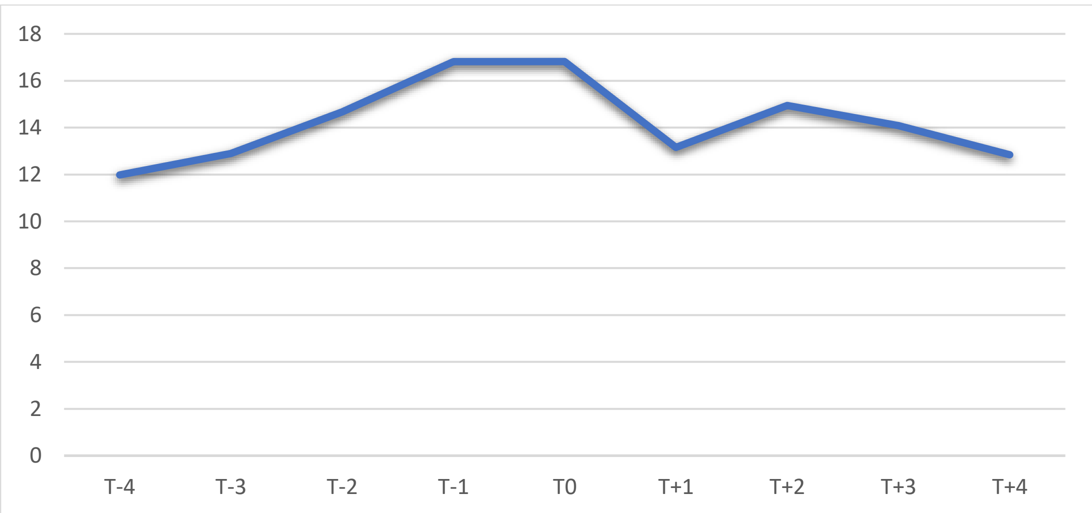
Non- interest income to Total income ratios of SBI during pre and post- merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Non-Interest income to Total income (%)	11.98	12.90	14.67	16.81	16.82	13.15	14.95	14.09	12.84	14.09	13.76	-2.34

Source: Computed from the Annual Reports of SBI

Figure 5.18

Non-interest income to Total income Ratios of SBI



Source: Computed from the Annual Reports of SBI

Non-interest income to Total income ratio shows a declining trend in post- merger phase. In the year of merger, the ratio was 16.82, in the next year it decreased to 13.15 percent then the ratio increased to 14.95 percent in the year 2019-20. While after that the ratio declined and became 12.84 in the year 2021-22, which implies the merger has not recognised any significant improvement in non- interest income.

5.3.5 Liquidity

Liquidity is the capacity and ability of banks to repay and reimburse short-term obligations (Ledhem & Mekidiche, 2020). It examines the interest rate risk and liquidity risks associated with Bank's operations. The bank's portfolio value relating to investments and loans will be much more volatile if the bank is heavily exposed to interest rate risk. A liquidity risk arises when banks are unable to meet short-term obligations and depositors claim unanticipated funds. The commonly used measures to examine liquidity of Bank’s are Cash to Deposit Ratio, Government securities to total assets ratio, total investment to total deposit ratio, liquid asset to total asset ratio and liquid asset to deposit ratio.

5.3.5.1 Cash to Deposit Ratio

According to RBI Cash deposit ratio of scheduled commercial banks is the ratio of cash in hands and balances with the RBI as a percentage of aggregate deposits. It is the amount of money a bank should have available as a percentage to the total amount of deposits. This ratio gives complete picture of banks liquidity.

Cash Deposit Ratio = Cash in hand and balance with RBI/ Total Deposit

Table 5.19

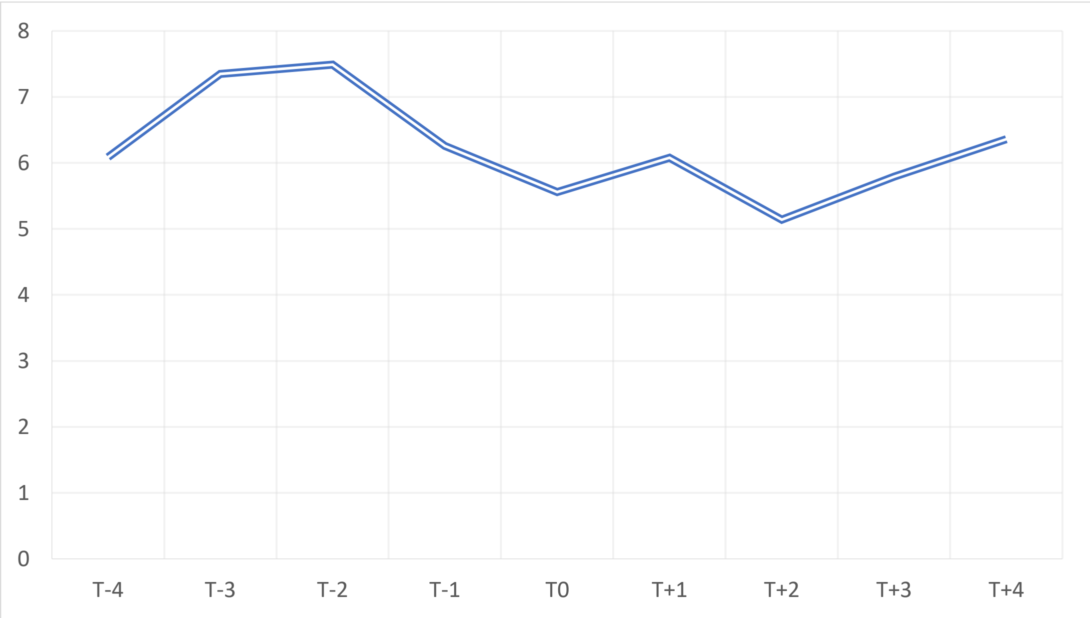
Cash to Deposit Ratios of SBI during pre-and post- merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Cash to Deposit Ratio (%)	6.09	7.35	7.49	6.26	5.56	6.08	5.14	5.79	6.36	6.80	5.84	-14.12

Source: Computed from the Annual Reports of SBI

Figure 5.19

Cash to Deposit Ratios of SBI



Source: Computed from the Annual Reports of SBI

From the table and graph the movement of cash to deposit ratio can be analysed from pre- merger to post- merger period i.e., from 6.09 percent to 6.36. After the merger the ratio is declined and became 5.14 in the year 2019-20 after that the ratio improved and finally it became 6.36 in the last financial year. It is witnessed that cash to deposit ratio have dropping attainment in post-merger phase compared to pre-merger phase, which indicates the bank's capacity to reserve cash has weakened. However, the bank tries to improve the liquidity position.

5.3.5.2 Govt. Securities to Total Assets Ratio (%)

Government securities are more liquid and secure risk-free assets. This ratio measures the risk associated with the assets held with the bank.

Government Securities to Total Asset Ratio= Government Securities/ Total Assets

Table 5.20

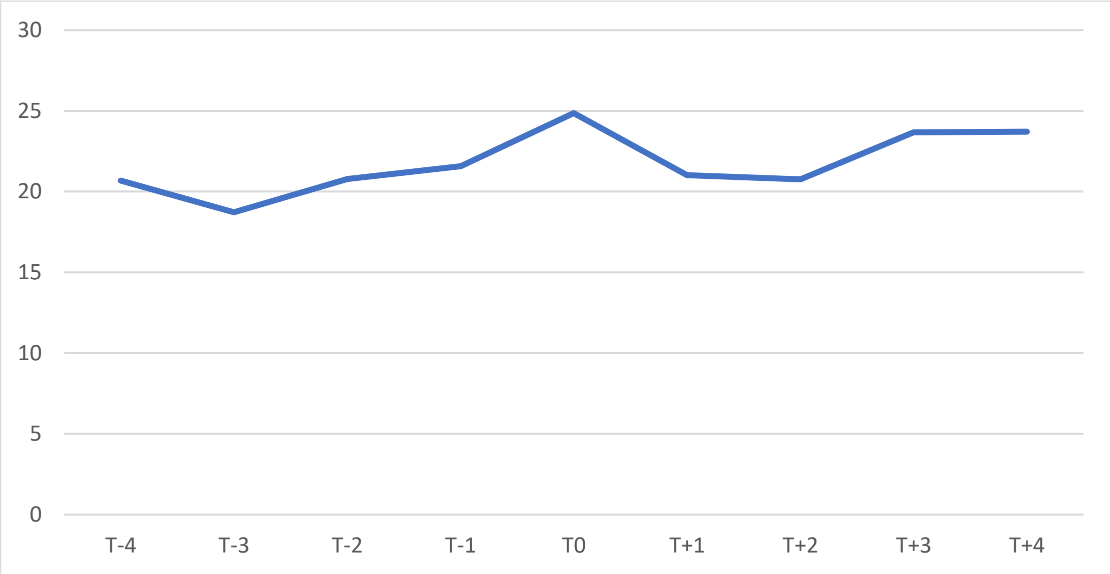
Govt. Securities to Total Assets Ratios of SBI during pre and post-merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Govt. Securities to Total Assets Ratio (%)	20.67	18.72	20.78	21.58	24.86	21.01	20.76	23.67	23.70	20.44	22.29	9.05

Source: Computed from the Annual Reports of SBI

Figure 5.20

Govt. Securities to Total Assets Ratios of SBI



Source: Computed from the Annual Reports of SBI

Government Securities to Total Assets ratio have 21.58 per cent value in 2016-17 which has improved and become 24.86 after merger, in the two following years after the merger the ratio declined then again improved and become 23.70 percent in the year 2021-22, the ratio improves 9.05 percent in the post- merger period, which indicates that more investment has been made in more liquid and secure risk-free assets.

5.3.5.3 Total Investment to Total Deposit Ratio (%)

Liquidity available to depositors is indicated by this ratio. By measuring this ratio, we can determine how liquid the bank is in meeting its obligations to its depositors.

Total Investment to Total Deposit Ratio= Total Investment/ Total Deposit

Table 5.21

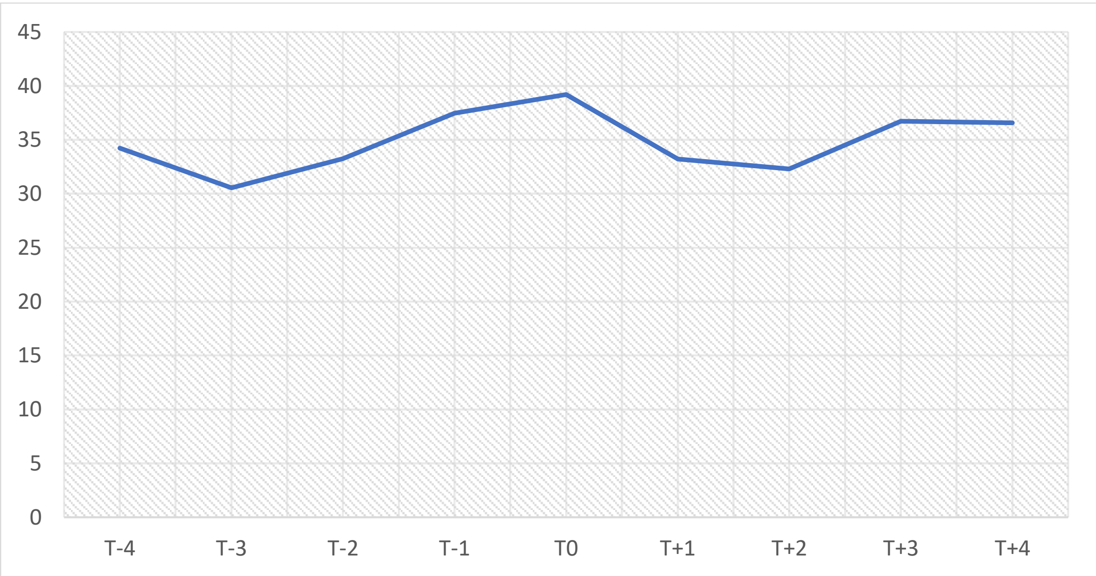
Total Investment to Total Deposit Ratios of SBI during pre and post- merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Total Investment to Total Deposit Ratio (%)	34.22	30.55	33.26	37.46	39.20	33.22	32.30	36.72	36.57	33.87	34.70	2.45

Source: Computed from the Annual Reports of SBI

Figure 5.21

Total Investment to Total Deposit Ratios of SBI



Source: Computed from the Annual Reports of SBI

From the table and graph it is evident that Total Investment to Total Deposit ratio has gained momentum with 39.20 per cent after the merger event but again goes decline. However, the ratio improved by 2.45 percent in post-merger period.

5.3.5.4 Liquid Assets to Total Assets Ratio (%)

This ratio indicates the percentage of liquid assets in the total assets of the bank. This ratio measures overall liquidity position of the bank.

Liquid Assets to Total Assets Ratio= Liquid Assets/ Total Assets

Table 5.22

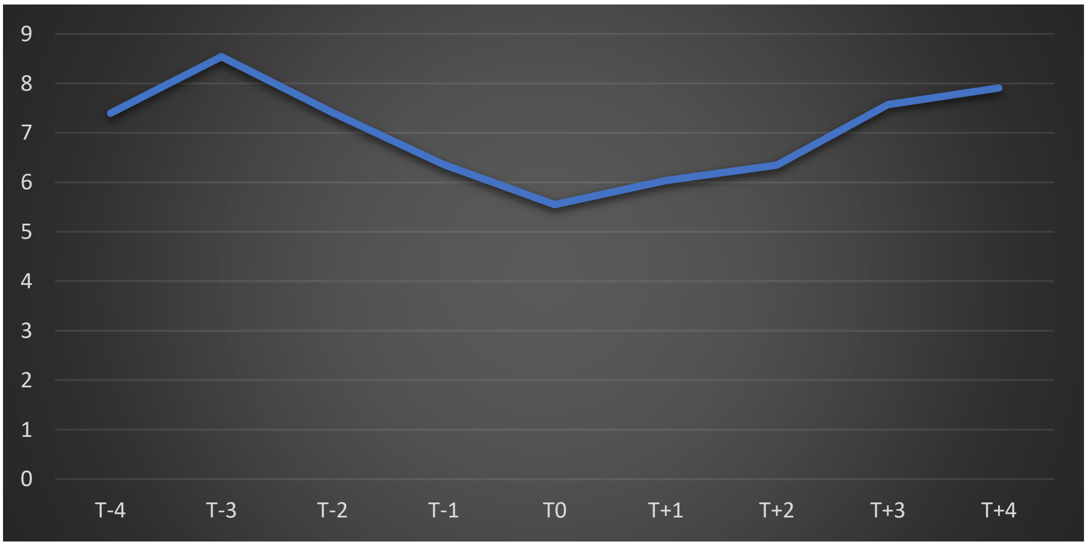
Liquid Assets to Total Assets Ratio of SBI during pre and post-merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Liquid Assets to Total Assets Ratio (%)	7.40	8.54	7.41	6.36	5.55	6.04	6.35	7.57	7.91	7.43	6.97	-6.19

Source: Computed from the Annual Reports of SBI

Figure 5.22

Liquid Assets to Total Assets Ratios of SBI



Source: Computed from the Annual Reports of SBI

Liquid Assets to Total Assets ratio decreased after the merger, the bank improves its liquidity position and become 7.91 percent in the year 2021-22. The merger could improve the liquidity position of the bank.

5.3.5.5 Liquid Assets to Deposit Ratio (%)

The ratio measures the liquidity available to the depositors.

Liquid Assets to Deposit Ratio= Liquid Assets/ Total deposits

Table 5.23

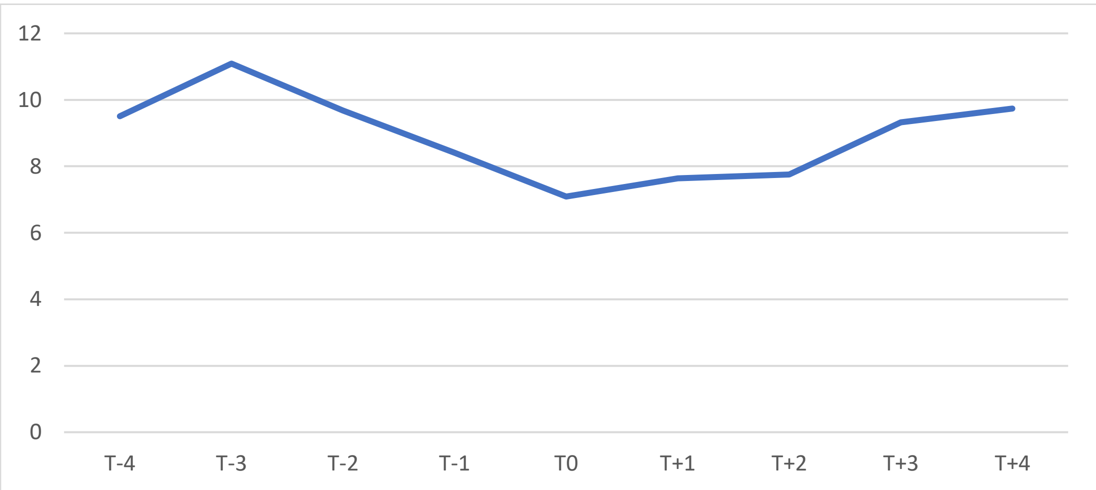
Liquid assets to Deposit Ratios of SBI during pre and post-merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Liquid Assets to Deposit Ratio (%)	9.51	11.09	9.68	8.41	7.09	7.64	7.75	9.32	9.74	9.67	8.61	-10.96

Source: Computed from the Annual Reports of SBI

Figure 5.23

Liquid Assets to Deposit Ratios of SBI



Source: Computed from the Annual Reports of SBI

Liquid Assets to Deposits ratio declined after the merger. After that it got improvement but not comes up to the ratio in the pre-merger phase. The ratio decreased by 10.96 percent in pre-merger period, while the bank improves the ratio and tries to maintain the liquidity.

5.3.6 Sensitivity

Sensitivity measures the bank's level of sensitivity to market risks. “Sensitivity to market risk is the measure of how resilient the assets, liabilities and net worth values of the bank are to changes in market conditions such as rate of interest, foreign exchange and inflation risk” (Ledhem & Mekidiche, 2020). The Bank's exposure to interest rate risk, foreign exchange volatility, and equity price risk is reflected in its sensitivity to market risks. Sensitivity to market risk can be assessed through Price Earning Ratio, Beta, Demand Deposit to Total Deposit and long- term Deposit to Total Deposit.

5.3.6.1 Price Earning Ratio

Price Earning Ratio (P/E Ratio) measures the relationship between bank’s stock price and earnings per share (EPS).

Price earning Ratio= Market Price of a share/ Earning per share

Table 5.24

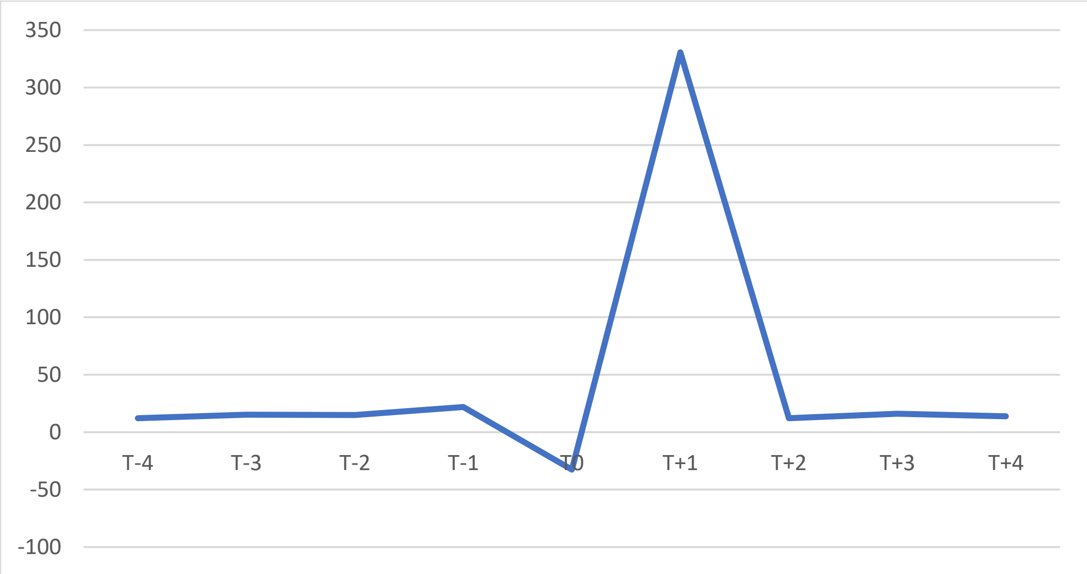
P/E Ratios of SBI during pre and post- merger period

	T-4	**T-3**	**T-2**	**T-1**	**To**	**T+1**	**T+2**	**T+3**	**T+4**	**Pre-merger mean**	**Post-merger mean**	**% change**
P/E Ratio	12.23	15.22	14.96	21.85	-32.58	330.67	12.13	15.93	13.91	16.07	93.16	479.71

Source: Annual Reports of SBI

Figure 5.24

P/E Ratios of SBI



Source: Annual Reports of SBI

From the table and graph it is observed that, after the merger, it was seen that the Price Earning Ratio unexpectedly fell to -32.58 percent, which may have easily interpreted as a "vote of no confidence" by the market on the stock price of SBI. Again, the Price Earning Ratio unexpectedly rose to 330.72 percent in the year following the merger, reflecting the market's "too optimistic vote" on the stock price of SBI. This could increase market risk and harm investors in the near future. After the merger, SBI's Price Earning Ratio showed a significant range, indicating unexpected share price exposure. After that the ratio declined and became normal. The violation in the ratio may be due to the effect of the merger.

5.3.6.2 Beta

Beta indicates the risk for investor. The beta of a security describes the activity of its returns when the market swings. A security's beta is calculated by dividing the product of the covariance of the security's returns and the market's returns by the variance of the market's returns over a specified period.

Table 5.25

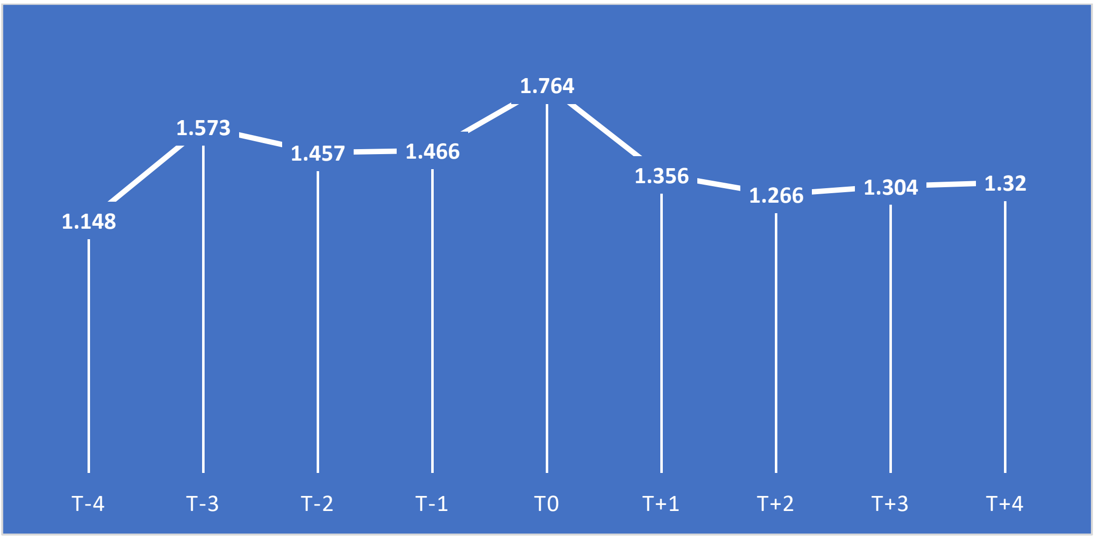
Beta of SBI during pre-and post-merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Beta	1.148	1.573	1.457	1.466	1.764	1.356	1.266	1.304	1.320	1.411	1.312	-7.016

Source: Computed from the data collected from website of NSE.

Figure 5.25

Beta of SBI



Source: Computed from the data collected from website of NSE.

The Table and graph show Beta values throughout the sample period, SBI stock is High Beta Stock which reflects high risk for investor. It is seen that just after merger the stock volatility has increased to a large extent because beta value increased to 1.764 in 2017- 18 from 1.466 in 2016-17 which adds addition risk to the stock but again it goes down 1.320 in the year 2021-22, the volatility is comparatively less since 2018-19 compared to previous period.

5.3.6.3 Demand deposits to total deposits

The demand deposit to total deposit ratio reflects the level of risk banks have to bear on a daily basis to meet their obligations to depositors.

Demand deposit to Total deposit= Demand deposit/ Total deposit

Table 5.26

Demand deposit to Total Deposit ratios of SBI during pre and post- merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Demand Deposit to total deposit (%)	8.12	7.90	8.08	7.45	7.03	7.07	7.01	7.79	6.83	7.89	7.18	-9.00

Source: Computed from the Annual Reports of SBI

Figure 5.26

Demand Deposit to Total Deposit Ratios of SBI

Source: Computed from the Annual Reports of SBI

The ratio of Demand Deposits to Total Deposits remained relatively stable after merger, it has become less and less volatile.

5.3.6.4 Long term deposits to total deposits

The ratio of long-term deposits to total deposits shows how vulnerable a bank is to using funds for long-term investment.

Long term deposits to total deposits= Long term deposit/ Total deposit

Table 5.27

Long term deposits to total deposits Ratios of SBI during pre and post-merger period

	T-4	T-3	T-2	T-1	To	T+1	T+2	T+3	T+4	Pre-merger mean	Post-merger mean	% change
Long term deposit to total Deposit (%)	57.09	58.66	57.38	55.43	55.51	55.43	55.77	54.60	55.48	57.14	55.32	-3.19

Source: Computed from the Annual Reports of SBI

Figure 5.27

Long term deposit to total deposit Ratio

Source: Computed from the Annual Reports of SBI

Long-term deposits at SBI are high both pre-merger and post-merger, indicating that the bank remains consistent in using funds for long-term investments even after the merger.

Table 5.28

Summary of the CAMELS

Financial indicators (CAMELS)	Expected effect on the likelihood of improvement in the bank's performance.	Effect of merger on the variables	Relative Change (%)
1. Capital Adequacy			
(a) Capital adequacy ratio% (Basel II)	Increase	Increased	0.75
(b) Debt- equity ratio	Decrease	Decreased	-0.81
(c) Total advances to total asset ratio	Increase	Decreased	-9.12
(d) Government securities to total investment ratio	Increase	Increased	0.34
2. Asset Quality			
(a) Net NPA to net advances	Decrease	Decreased	-36.39
(b) Gross NPA to Gross advances ratio	Decrease	Decreased	-8.71
(c) Total investment to total asset ratio	Increase	Increased	8.04
3. Management efficiency			
a) Total expenditure to total income ratio	Decrease	Increased	0.76
b) Credit Deposit Ratio	Increase	Decreased	-15.01
c) Total income to total asset ratio	Increase	Decreased	-15.48
d) Profit per employee	Increase	Increased	30.77
e) Business per employee	Increase	Increased	67.46
4. Earning quality			
a) Dividend pay- out ratio	Increase	Decreased	-53.82
	Increase	Decreased	-29.09

Financial indicators (CAMELS)	Expected effect on the likelihood of improvement in the bank's performance.	Effect of merger on the variables	Relative Change (%)
b) Return on asset	Increase	Decreased	-12.45
c) Return on equity	Increase	Decreased	-4.69
d) Spread to total asset	Increase	Increased	0.38
e) Interest income to total income	Increase	Decreased	-2.34
f) Non-interest income to total income			
5. Liquidity			
a) Cash to deposit ratio	Increase	Decreased	-14.12
b) Government securities to total asset ratio	Increase	Increased	9.05
c) Total investment to total deposit ratio	Increase	Increased	2.45
d) Liquid asset to total asset ratio	Increase	Increased	6.97
e) Liquid asset to deposit ratio	Increase	Decreased	-10.96
6. Sensitivity			
a) Price earnings ratio	Increase	Increased	479.71
b) Beta	Decrease	Decreased	-7.02
c) Long term deposit to total deposit (%)	Decrease	Decreased	-9.00
d) Demand deposit to total deposit (%)	Decrease	Decreased	-3.19

Source: Compiled by the researcher

5.4 Effect of Merger on the Operational Efficiency

One of the objectives of merger is to better scale efficiency. The study made an attempt to analyse the effect of merger on the operational efficiency of SBI by using Data Envelopment Analysis.

5.5 Data Envelopment Analysis (DEA)

DEA is a non- parametric model introduced by Charnes et al. (1978), This approach is based on linear programming and uses a weighted measure of multiple inputs and outputs to calculate the relative efficiency of a group of DMUs (Hou et al., 2014). Consider a set of n observations on the DMUs (Decision Making Units). Each observation, DMU_j (j= 1,…., n) uses m inputs x_{ij} (i= 1,…,m) to produce s outputs y_{rj} (r =1,…,s). DMU_o represents one of the n DMUs under evaluation, and x_{io} and y_{ro} are the ith input and rth output for DMU_o, respectively.

In recent years, DEA has been applied frequently to mergers and acquisitions. A number of studies have been conducted analyzing the efficiency of M&A's gains. Bogetoft & Wang (2005) introduced simple production economic models by employing a DEA approach to estimate the potential efficiency from mergers. Lozano & Villa (2010) proposed pre-and post-merger DEA models to estimate the efficiency gains resulting from a merger. (Halkos & Tzeremes, 2013; Liu et al., 2007; Lo et al., 2001; Peyrache, 2013) used DEA approach in M& A context.

5.5.1 Components of Efficiency Score

- **Technical Efficiency** (TE) - DMU's overall success in utilizing its inputs

Technical Efficiency can be classified into Pure Technical Efficiency and Scale Efficiency

- **Pure Technical Efficiency (**PTE)- The efficiency of a firm to decrease its input to achieve the desired level of output
- **Scale Efficiency** (SE) – It is a measure of the extent to which a DMU deviates from an optimal scale

5.5.2 Variables used in DEA

- **Input Variable**:
  1. Interest expended
  2. Operating expense
- **Output Variable**
  1. Interest earned
  2. Non-interest income

$H_{5.1}$: Operational Efficiency of the SBI improved after the merger.

Table 5.29

Input and Output Variables used for Measuring Operational Efficiency

Year	Interest expended	Interest earned	Operating expenses	Non- interest income
2012-13	75325,79,65	119657,09,90	29284,42,23	16034,84,33
2013-14	87068,63,25	136350,80,39	35725,85,13	18552,91,64
2014-15	97381,82,36	152397,07,42	38677,64,14	22575,89,26
2015-16	106803,49,21	163685,30,61	41782,36,65	28158,36,01
2016-17	113658,50,34	175518,24,04	46472,76,94	35460,92,75
2017-18	145645,60,00	220499,31,56	59943,44,64	44600,68,71
2018-19	154519,77,80	242868,65,35	69687,73,74	36774,88,78
2019-20	159238,76,57	257323,59,22	75173,69,02	45221,47,80
2020-21	154440,63,33	265150,63,38	82652,22,35	43496,37,47
2021-22	154749,70,43	275457,29,04	93397,51,52	40563,91,40

Source: Annual Reports of SBI

Table 5.30

Efficiency of merger -Result of Data Envelopment Analysis (DEA)

Decision Making Unit	Technical Efficiency Score (CRS)	Pure Technical Efficiency Score (VRS)	Scale Efficiency Score
A	1	1	1
B	0.97408332	0.978074862	0.995918981
C	0.988202886	1	0.988202886
D	1	1	1
E	1	1	1
Pre-merger average	0.992457	0.995615	0.99682
F	0.981512925	1	0.981512925
G	0.959044377	0.994157289	0.964680728
H	0.987188949	1	0.987188949
I	1	1	1
J	1	1	1
Post-merger average	0.9855493	0.9988315	0.986677

Source: Calculated by MAX DEA with the data taken from SBI Annual Reports.

From the table 5.9 it is evident that the technical efficiency score is slightly reduced in post- merger period (0.9855493) compared to pre- merger period (0.992457). Pure Technical efficiency score slightly increased after the merger (0.9988315) while comparing pre-merger score (0.995615). Th scale efficiency score declined in the post-merger period (0.986677) compared to pre- merger period (0.99682).

5.6 Conclusion

The effect of merger of SBI and its associates on financial performance of the bank is analysed by using CAMELS rating model. By examining CAMELS indicators, in case of Capital Adequacy three indicators are in the correct direction to improve the performance, except Total Advances to Total Asset Ratio.

While analysing the Asset Quality of the bank, Net NPA and Gross NPA ratios were declined in post-merger phase, which indicates the bank improves its Asset quality and could achieve one of the merger objectives of to reduce the level of NPA, which is a major obstacle to the bank while improving the financial performance. The SBI could enhanced Asset quality after the merger.

Management efficiency of SBI merely dropped after the merger. The expenditure is increased in the post-merger phase, but later SBI reduced it. Total income to total asset ratio and credit deposit ratio declined, it is not a good sign for the improvement. However, Profit per Employee and Business per Employee ratios were highly improved, which indicates the management efficiency and business efficiency is improved. Hence it can be stated that employee efficiency has increased after merger but management efficiency to reduce expenditure and mobilise credit is not much satisfactory and not in proportion to deposit.

While analysing the Earning Quality of the SBI, majority of the indicators are in opposite direction of improving earnings. SBI incurred a huge loss after the merger, it affects the bank's earning quality. After that SBI overcome the challenges and recovered its earnings& profitability. Due to the negative earnings after the merger, the bank has not paid any dividend to shareholders' consecutively three years after the merger, it is shown in the declining of DP ratio. ROA and ROE also declined due to the negative earnings after the merger. Later all the ratios got improved and SBI enhanced its earnings quality.

The liquidity position of the SBI make better after the merger. All the ratios except cash to deposit ratio and liquid asset to deposit ratio reduced in the post- merger period compared to pre- merger period. However, very soon after the merger all the ratios gained and achieved the Bank's liquidity position. Investment to meet short-term obligation is satisfactory but cash in hand and liquid asset in proportion to deposit are not satisfactory.

The sensitivity to market risk is decreased after the merger period. The P/E ratio dropped in the year of merger and in the next year it suddenly boosted, this phenomenon might increase the market risk and harmful to the investor. But after that SBI got stability in the P/E ratio. SBI could achieve to reduce the risk element after the merger.

The financial performance of SBI has enhanced after the merger. In the preliminary stage of merger SBI suffered huge losses but later the Bank could achieve its financial stability. Among the CAMELS variables for measuring the financial performance, bank underperformed mainly in Management efficiency and Earning quality. In case of remaining parameters bank showing positive impact. The SBI could achieve its main objective to reduce the level of NPA, NPA reduced to a great extent after the merger.

By analysing all indicators of CAMELS, it is clear that the bank could improve its overall financial performance after the merger. The SBI could achieves maximum of its predetermined objectives through its journey after the merger. The merger is a long-visioned endeavour, though its effect will be seen in the future.

The efficiency of State Bank of India in reducing its expenses to achieve the desired level of output has increased. Whereas the efficiency to reach at optimum scale of operation is comparatively low in post-merger period.

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CHAPTER 6

EFFECT OF MERGER OF SBI ON SHAREHOLDERS' WEALTH

6.1 Introduction

Mergers and acquisitions have evolved as the most striking illustration of vision and strategy in the corporate world. A single deal can change the strategic course of organisations permanently. Capital market reactions may create change in the direction of company, enhance the careers of managers, and add value to shareholders(Puranam et al., 2000).

Mergers and acquisitions, in which two businesses are united to achieve certain strategic and business goals, are significant corporate transactions that affect a wide range of stakeholders, including employees, managers, rivals, and the economy in addition to the target company. Huge repercussions for shareholders, lenders, and the aforementioned constituents if they are successful or unsuccessful(Sudarsanam, 2004).

As a stake holder, the shareholders of the merged banks also expect certain advantages in the form of wealth creation. Wealth creation means the value of the company as perceived by the shareholders or investors.

This chapter analyse the effect of SBI merger with its associates on the shareholders of bidder bank, in short-term and long -term. Typically, shareholder wealth gains are measured by abnormal returns, i.e., returns exceeding a benchmark return.

To determine whether M&A significantly impacts short- and long-term shareholder returns, researcher employ event study methodology developed by Dodd & Warner (1983) and Brown & Warner (1985) and extended by Barber & Lyon (1997) . It comprises two steps: examining the short-term effects of the announcement on shareholders' wealth by using CAR (Cumulative Abnormal Return), and examining the long-term stock performance of the newly formed enterprise by using BHAR (Buy and Hold Abnormal Return)(Kiesel et al., 2017).

6.2 Short- term analysis

Event study methodology is one of the most common statistical research methods in the field of finance (Bowman, 1983; Brown & Warner, 1980, 1985; David, 2010; Henderson, 1990; Konchitchki & O'Leary, 2011; Kothari & Warner, 2007; MacKinlay, 1997; Mcwilliams & Siegel, 1997; McWilliams & McWilliams, 2000; Peterson, 1989; Serra, 2004; Wells, 2004; Weston et al., 2014). It is used to evaluate the security prices surrounding an event to see how the market reacts to it. Event study approach has been used to analyse the secondary data (stock prices of the companies who announced mergers and acquisitions). This enables a researcher to determine whether investors received any abnormal returns as a result of these events. Abnormal return is the distinction between the actual return and expected return on a given day, as determined by a return model, (chosen by the researcher) (Rani et al., 2016). "The short-term analysis is based on the assumption that capital markets incorporate new information immediately after the first announcement of a transaction"(Fama, 1970).

6.3Mechanics of event study

- **Event definition and date of announcement**

An event is a particular action that the researcher would like to study. It is expected that the event will convey some information that may influence stock prices. For this study, merger of SBI and its associates defined as event (Rani et al., 2016).

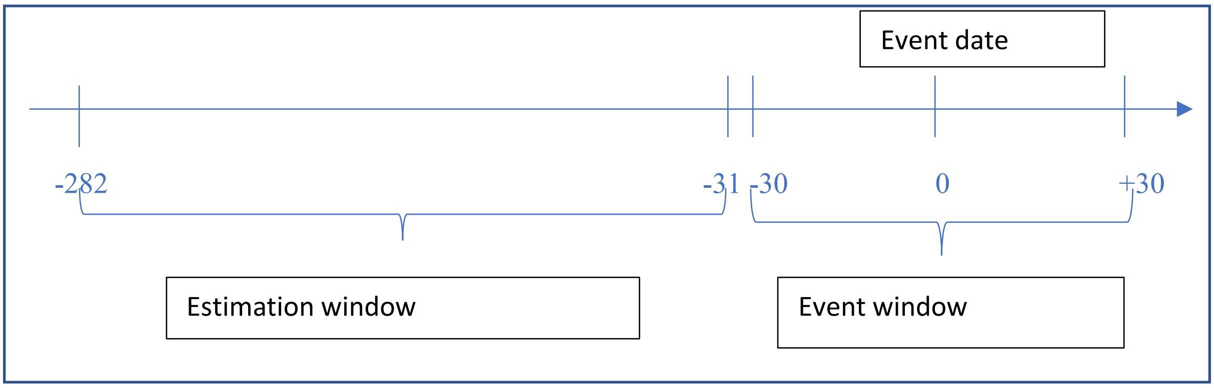
The first step in the event study methodology is to define the event as the date on which the acquisition is first publicly announced. In general, day 0 refers to the day the announcement is first published in a newspaper. For the purpose of this study, the announcement day has been defined as the day the announcement through Government Gazette notification on 22nd February 2017.

➨ Estimation period

The estimation window is the time period in which the expected return is estimated. The estimation period is the period prior to the event and the event window. The expected return is calculated using a time period other than event window. For the present study estimation window is from -282 days to the day -31 (from 31 to 282days prior to the event window), comprising of 252 trading days. It ensures estimates of the normal return model are not affected by event-related returns.

Figure 6.1

Event window



Source: Compiled by the researcher

Figure depicts the event window and estimation window. There must not be an overlap between the estimation window and the event window.

➨ Event window period

The event window is the period in which an event occurs where the security prices of the particular firms are examined. The event window for this study is chosen as (-30, +30). The event, say, the merger announcement, is represented by 0 in the window. Here, the time period prior to announcement date is represented by -30 and +30 represents 30 days' time period after the announcement date. In order to conduct an in-depth analysis, the event window has been further broken down. The abnormal return over varying windows, namely, (-5, 0), (-5, +5), (0, +5), (-10, 0), (-10, +10), (0, +10), (-30, 0), (-30, +30), and (0, +30) have been observed.

➡ Anticipation window

Event methodology in the study allows to measure the responsiveness of stock market returns to the event. Furthermore, this methodology allows to test whether the stock market has anticipated the effect of the event that would have on the corporate value. Therefore, it allows to test the market efficiency and more importantly, it identifies insider trading before the announcement event. These effects are captured in the anticipation window. Anticipation window can be described as the range of trading days before the event date to check for abnormal returns in response to the event. Generally, 5 to 10 trading days are for studying corporate announcements. However, for this study, the researcher identified an anticipation window of 5 days, 15 days and 30 days.

➡ Adjustment window

Adjustment window can be explained as those trading days right after the event date that allows to test whether there have been any significant price changes after the event. If the adjustment window shows an abnormal return, the market is inefficient since information are not incorporated and has either under reacted to the news release if the direction of adjustment is the same as the direction of the event effect or overreacted if the directions of those effects are reversed. As in anticipation window, the researcher has selected the adjustment window as (-5, +5), (-15, +15), and (-30, +30).

➡ Estimation model and definition of Abnormal return

The estimation model is the model used to estimate the expected return. Various models are existing in event studies, there are three major models, constant return, market adjusted and CAPM (market model or single index model). They are different in terms of methods used to calculate abnormal return to detect whether some event have a material impact on corporate value

Abnormal return is determined as;

$$AR_{it} = R_{it} - \mathbb{E}[R_{it} | X_t] \qquad (1)$$

Where AR_{it} is abnormal return, R_{it} is actual return and $\mathbb{E}\ [R_{it}]$ is normal return or expected return. In this study researcher selected constant mean return model and market model developed by Dodd and Warner (1983) to determine abnormal returns.

In constant return model the assumption is that the expected return for stock is just equal to average daily return during the estimation window and then calculate the differences between the realized returns and the expected returns and that would be the abnormal return.

constant-mean-return model can be calculated as;

$$AR_{i,t} = R_{i.t} - \widehat{\mu_\iota} \tag{2}$$

where $\widehat{\mu_\iota}$ is the estimate of the average return.
Market model to estimate the abnormal return;

$$AR_{i,t} = R_{i,t} - \left(\hat{\alpha}_i + \hat{\beta}_i R_{m,t}\right) \tag{3}$$

where Ri,t is the return of company I on day t, Rm,t is the return of the benchmark index on day t, αi and βi are the regression coefficients of company i. National Stock Exchange (NSE) indices is used as benchmark index.

The CAR (Cumulative Abnormal Return) during for stock *i* during the event window is calculated as;

$$CAR_{i,[\tau1,\tau2]} = \sum_{t=\tau1}^{\tau2}\left[R_{i,t} - \left(\hat{\alpha}_i + \hat{\beta}_i\, R_{m,t}\right)\right] \tag{4}$$

Hypothesis for analysing short- term effect is;

$H_{6.1}$: Merger of SBI and its associates will provide significant short-term abnormal returns to the SBI shareholders.

Both the model is estimated by using STATA software and the results are given below;

Table 6.1

Abnormal returns of SBI in response to the event SBI merger announcement through Government Gazette notification on 22nd February 2017.

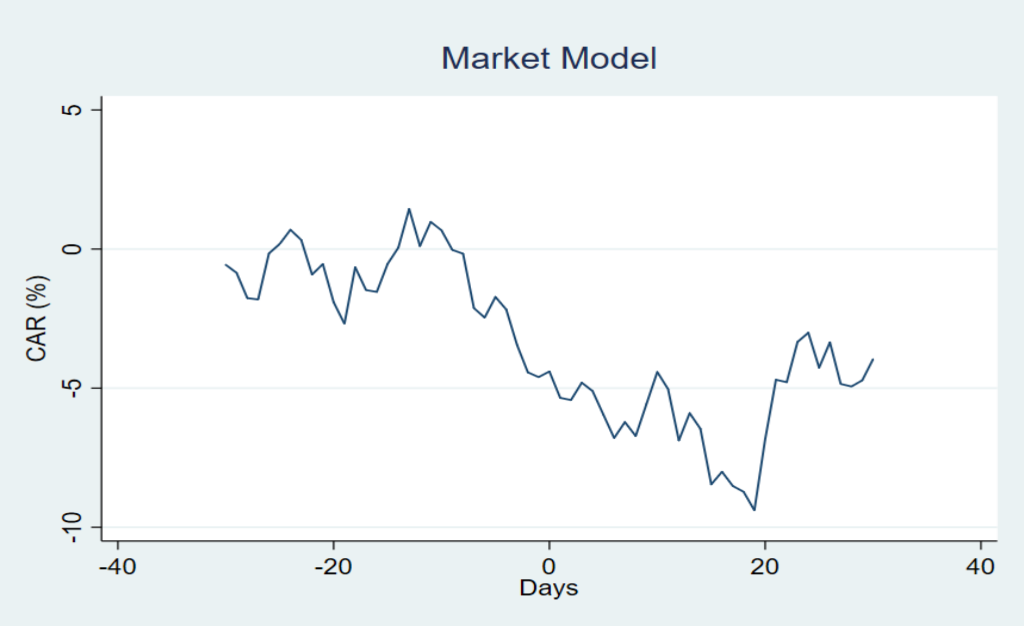
	SBI					
	Constant Mean Return Model			Market Model		
	CAAR	t- test	p value	CAAR	t- test	p value
Anticipation (-5) [-5, 0]	.37%	.0625	.9502	-1.94%	-.4220	.6734
Event (0) [-5, +5]	-1.80%	-.2206	.8255	-3.49%	-.5560	.5787
Adjustment (5) [0, +5]	-1.65%	-.2763	.7825	-1.35%	-.2934	.7694
Anticipation (-15) [-15,0]	3.52%	.3548	.7230	-2.86%	-.3737	.7089
Event (0) [-15, +15]	3.26%	.2300	.8183	-6.92%	-.6321	.5279
Adjustment (15) [0, +15]	.27%	.0269	.9785	-3.86%	-.5048	.6141
Anticipation (-30) [-30, 0]	7.89%	.5565	.5783	-4.40%	-.4014	.6885
Event (0) [-30, +30]	13.12%	.6269	.5313	-3.96%	-.2449	.8068
Adjustment (30) [0, +30]	5.75%	.4053	.6856	.65%	.0591	.9530

Source: Computed by STATA, data collected from https://www.nseindia.com/

Table 6.1 shows the CAAR, p values and t value for all anticipation, adjustment and event itself. The analysis reveals that p-values are greater than 0.05 for all event windows hence there is no significant change in Cumulative Abnormal Return in both constant mean return model and market model. Hence the alternative hypothesis is failed to accept. SBI shareholders could not earn any abnormal return due to merger in short run.

Figure 6.2

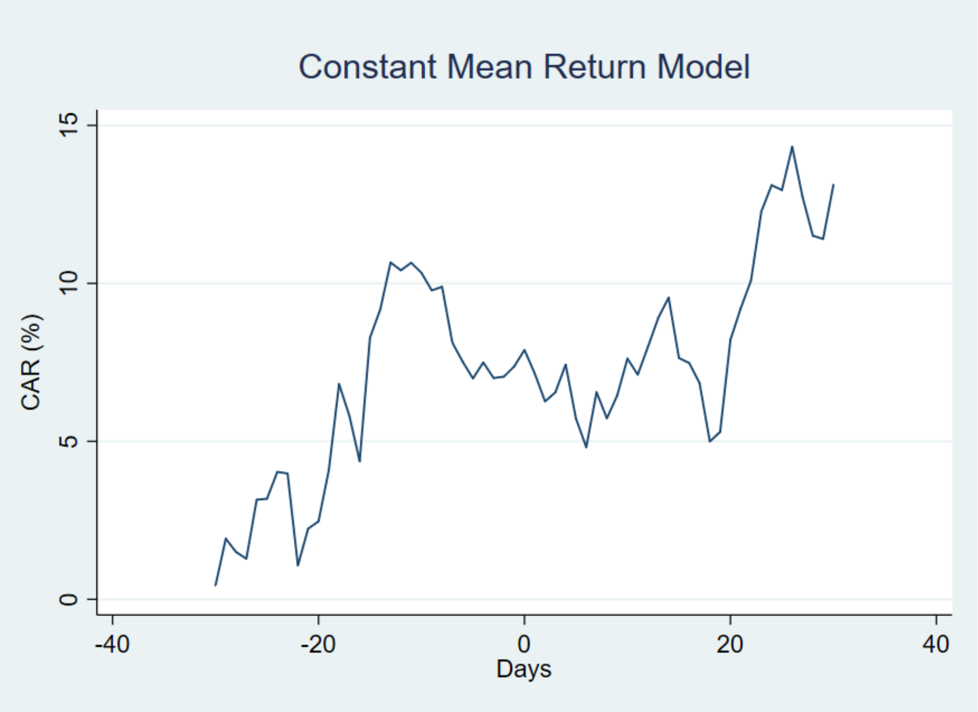
CAR of SBI in response to the event 'Merger of SBI and its Associates



Source: Generated by STATA, data collected from https://www.nseindia.com/

Figure 6.3

CAR of SBI in response to the event 'Merger of SBI and its Associates



Source: Generated by STATA, data collected from https://www.nseindia.com/

6.4 Long-term analysis

For the long-term analysis here use the BHAR (Buy and Hold Abnormal Return) method to measure the return difference between the acquiring firms compared to benchmark. According to Lyon et al. (1999), the BHAR approach is robust, whereas the calendar time method is miss-specified in non-random samples. The long- term value creation was assessed using the BHAR methodology in analogy to (Barber & Lyon, 1997) and (Mitchell & Stafford, 2000). This approach allows for the evaluation of abnormal returns over a longer time horizon and overcomes the limitations of using narrow windows around the announcement dates, which only measure expected cash flows. In essence, BHAR is the excess return an investor will experience over the industry average if he buys the shares of the acquiring firm after the merger. According to Barber & Lyon (1997) and Mitchell & Stafford (2000), the BHAR is an appropriate estimator because it captures the risk preferences and investment goals of investors. In their view, this was an important aspect of the model since investors' views on both the acquirer and the benchmark companies were directly influenced by such goals and preferences. To assess whether merger create long-term wealth, would focus on actual post-merger performance rather than "announcement effect". So here construct the event windows for analysis beginning from the day of the effective date of merger rather than announcement date. Four different event windows have been defined for examining the long-term wealth effect of merger with length of 3 months, 6 months, 12 months and 24 months holding period during post- merger period. For estimating 3 months BHAR, 1 year data were used, for 6 months 2 years, for 12 months 3 years and for 24 months 5 years respectively. BHAR can be calculated by the following standard formula;

$$BHAR_{i(t1,t2)} = \prod {}_{t1}^{t2} (1+R_{i,t}) - \prod (1+R_{i,t}) \tag{4}$$

where Ri,t is the return of company i on day t and Rm,t is the return of the benchmark index on day t. Here benchmark index is NSE indices.

Hypothesis for analysing long- term effect is;

$H_{6.2}$: Merger and acquisition of SBI and its associates will provide significant long-term abnormal returns to the SBI shareholders.

The analysis is done by using excel software. The results are given below;

Table 6.2

Long-term stock effect of SBI merger

	Buy and hold abnormal return	**t- value**	**S.D.**	**p value**
BHAR 3	-23.15%	-1.0870	0.2130	0.2785
BHAR 6	-15.49%	-0.5551	0.2790	0.5792
BHAR 12	-4.51%	-0.1151	0.3922	0.9084
BHAR 24	23.25%	0.4423	0.5256	0.6584

Source: https://www.nseindia.com/

The table shows the results of BHAR analysis. From the table it is evident that all the p values are higher than 0.05 hence there is no significant BHAR for the shareholders after the merger. Hence the alternative hypothesis is failed to accept. There is no significant effect on shareholders after the merger.

6.5 Conclusion

In this chapter analysed the effect of merger of SBI and its associates on the shareholders of bidder bank. The analysis checks whether creates any positive or negative abnormal returns to shareholders due to the merger in short-term and long-term. The analysis proved that in both short-term and long-term there is no significant changes in the abnormal returns, hence there is no change in the shareholders wealth due to the merger.

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CHAPTER 7

EFFECT OF MERGER OF SBI ON EMPLOYEES

7.1 Introduction

As a way to improve efficiency, generate value, reduce costs, and increase market share, mergers and acquisitions have been used for decades. Whereas historically about 70 to 90 percent of mergers are fail or fail to attain their ultimate objectives (Christensen et al., 2011; Marks & Mirvis, 2010; Rafique, 2021). The failures of mergers and acquisitions are generally caused by an overly ambitious management team, ineffective strategic oversight, inaccurate valuation, unforeseen economic factors, and difficulties with integrating the company (Rafique, 2021). Rafique (2021) focused on integration obstacles, particularly human emotions, and resource management in post -merger. Human resources are an invaluable asset to any organization, but when the uncertainties caused by potential change of mergers, acquisitions, and restructuring, the performance is greatly affected. In contrast, senior management focuses on organizational challenges, resulting in staff feeling neglected, undervalued, and misinformed. Often, experienced staff leave an organization, and the management is expected to implement change with unmotivated, inexperienced employees, leading to failed mergers(Rafique, 2021). Cultural incompatibility is a major factor caused to merger failures(Buono & Bowditch, 2003; Cartwright et al., 2007; Marks & Mirvis, 2010). A merger or transformational change can succeed or fail based on human factors such as acceptance and readiness for change, conflict of interests, and cultural incompatibility(Rafique, 2021). M&A failures are often caused by employee departures and difficulties in integrating employees sufficiently to get them to work together(Boeh & Beamish, 2007).

In the process of restructuring, the most affected stakeholder is employees. They affected Psychologically, culturally, and financially. Since they follow common values, culture, assumptions and fears, restructuring makes several challenges to them. “Employees have a ‘patterned mindset’; hence it becomes difficult to them to adopt new set of changes in the challenged environment.” This creates fear in their minds turns to psychological turmoil. The biggest challenge they face is to learn new skills and unlearn old skills (Aurora et al., 2011). The employees become uneasy and dubious about their future (Ghosh Ray, 2010). Employees resistance to change due to fear or uncertainty and complexity, mainly due to job loss caused by merger. A change management strategy should include counselling, support, and training (Lam, 2010).

The announcement of State Bank of India’s mega merger with its associate banks turned more controversial and ambiguous in the minds of employees, especially who is working in associate banks. The erstwhile associate banks' officers and clerks feel they have been given a raw deal after several instances of arbitrary transfers and loss of seniority (“Post the Merger with SBI, Discontent Brewing among Associate Bank Staff,” 2017). BusinessLine (2017) reports that, “several former associate bank employees expressed disappointment over how they were treated during the initial stages of this merger. A number of associate bank employees above Scale 4 grade have lost seniority since the merger, compared with their peers at SBI".

State Bank of Travancore (SBT), in existence more than seven decades and often referred to as Kerala’s own bank, it went into oblivion on March 31 2017. The bank is merged with SBI from the new fiscal year. As a Bank of Kerala, SBT have its own values and culture. Its work environment is entirely different from its parent company. The employees of SBT stated that SBT employees have heart and SBI employees have brain. They couldn’t accept the merger. Most of them opposed, appealed, even they take VRS.

“As a result of the merger, more than 14,000 employees (5,000 officers and the rest comprising clerical and subordinate staff) and 1,200 SBT branches (880 in Kerala alone) will cease to exist under the brand name SBT. In all, 400 branches of SBT will be physically closed down” (“State Bank of Travancore Gets Ready to Go into Oblivion,” 2017)

KS Krishna, former General Secretary, State Bank of Travancore Employees Union stated “We are being treated as second-class citizens at SBI. The management has not been hearing the issues being raised by us. We are hopeful of a solution with the management without having to go to the courts,” (“Post the Merger with SBI, Discontent Brewing among Associate Bank Staff,” 2017).

C.H. Venkatachalam, AIBEA general secretary said that “the proposed merger of State Bank of India with its five associate banks from April 1 will throw up numerous financial and physical challenges to the industry, banks, employees and customers. Firstly, it will affect the seniority of top officials of Associate Banks; secondly, it will result in redeployment or loss of jobs of some workmen and closure of branches and finally, the banks might lose some of their regular customers”. Aforesaid he mentions that AIBEA opposed the merger from its beginning as there was scope for opening more banks in the country, instead of closing the existing ones, citing proximity to each other. “No doubt, the revenue will increase, but at what cost? What we need is not big, but strong, efficient and vibrant banks. Big banks also mean bigger risks. It will not open branches in rural or unbanked areas. Lots of rich people will become its customers, while small customers, who were loyal to some of these associate banks, will move to other banks post-merger. It will benefit only rich people”. (Anand, 2017)

The SBI mega merger is come in to effect from 1st April 2017, with the strong oppositions from the different stakeholders especially employees of associate banks.

In this situation the researcher made an attempt to study the effect of merger on the employees of target bank (SBT) and bidder bank (SBI). The researcher also tries to know the employees’ apprehension in pre and post- merger period and their perception towards different aspects in post- merger period.

This chapter discusses the effect of merger of SBI with respect to human aspect.

7.2 Frequency distribution of Sample Units

This section shows the profile and frequency distribution of the sample units.

Table 7.1

Frequency distribution of Sample Unit

Categorical Variable	Category Levels	Frequency	Percentage
Previous employer before the merger	SBI	125	38.5
	SBT	200	61.5
	Total	**325**	**100**
Designation	Junior Associate	91	28
	Senior Associate	74	22
	Chief Associate	49	15.1

Categorical Variable	**Category Levels**	**Frequency**	**Percentage**
	Assistant Manager	48	14.8
	Deputy Manager	40	12.3
	Chief Manager	23	7.1
	Total	**325**	**100**
Gender	Male	185	56.9
	Female	140	43.1
	Total	**325**	**100**
Age (Years)	21-30	62	19.1
	31-40	141	43.4
	41-50	54	16.6
	51-60	68	20.9
	Total	**325**	**100**
Educational Qualification	Graduation	172	52.9
	Post-Graduation	90	27.7
	Professional degree	63	19.4
	Total	**325**	**100**
Experience (Years)	1-5	50	15.4
	6-10	130	40
	11-20	76	23.4
	21-30	35	10.8
	31-40	34	10.5
	Total	**325**	**100**

Source: Field survey

The table 7.1 gives an overall view of the frequency distribution of the sample taken for the study. It provides the characteristics of the sample. The categorical data includes previous employer before the merger, designation, gender, age, educational qualification and experience of employees of sample unit. The sample taken for the study combines 38.5 per cent SBI employees and 61.5 per cent SBT employees (target bank). Which consists 28 per cent Junior associates followed by senior associates (22%), Chief associates (15.1%), Assistant managers (14.8%), Deputy manager (12.3%) and Chief Manager (23%). 56. 9 percent represents male employees and 43.1 percent represents female employees. Majority of the sample (43.4%) comes under 31-40 years age group. 52.9 percent of the respondents have the graduation followed by post-graduation (27.7%) and professional degree (19.4%). Major part of sample comes under 6-10 years job experience (40%).

7.3 Employees' awareness on merger of SBI

The employee's awareness regarding merger is an important matter of concern. For the smooth running of an organisation employee's awareness is essential especially in case of mergers and acquisitions. The awareness of employees regarding merger indicates the communication between the management and employees. Researcher analyse employees' awareness on purpose of merger and on settlement between banks as a part of merger. Statements are measured on the basis of 3-point scale. Fully aware coded as 3, slightly aware coded as 2, and not aware coded as 0.

Table 7.2

Descriptive statistics of employees' awareness on merger

Variables	Category	Awareness on purpose of merger		Awareness on settlement between banks	
		Mean	S.D.	Mean	S.D.
Type of Bank	SBI	2.66	0.525	2.27	0.664
	SBT	2.53	0.601	2.27	0.669
Designation	Junior Associate	2.48	0.639	2.15	0.665
	Senior Associate	2.57	0.599	2.22	0.727
	Chief Associate	2.55	0.58	2.35	0.631
	Assistant Manager	2.58	0.539	2.35	0.668
	Deputy Manager	2.73	0.452	2.33	0.616
	Chief Manager	2.74	0.449	2.43	0.59

Variables	Category	Awareness on purpose of merger		Awareness on settlement between banks	
		Mean	S.D.	Mean	S.D.
Experience (in years)	Below 5	2.54	0.579	2.10	0.647
	6-10	2.60	0.579	2.32	0.671
	10-20	2.59	0.546	2.29	0.649
	21-30	2.54	0.611	2.26	0.701
	Above 31	2.53	0.615	2.29	0.676
Educational Qualification	Graduation	2.46	0.634	2.23	0.659
	Post-graduation	2.70	0.461	2.33	0.636
	Professional degree	2.71	0.49	2.29	0.728
Gender	Male	2.56	0.606	2.29	0.691
	Female	2.60	0.534	2.24	0.633
Overall awareness of employees		2.58	0.576	2.27	0.666

Source: Field survey

The table 7.2 shows the descriptive statistics of awareness of employees of different categories. Employees are highly aware on purpose of merger (Mean=2.58, S.D.=.576) than on settlement between banks (Mean=2.27, S.D.=.666). While considering type of bank, bidder bank (SBI) employees are highly aware on purpose of the merger (Mean=2.66, S.D.=.525) followed by target bank (SBT) employees (Mean= 2.53, S.D.=.601), their awareness on settlement between banks are equal. On the basis of designation, Chief managers are highly aware on purpose of merger and settlement between banks as a part of merger. While classifying experience wise, 6-10 years and 11-20 years' experienced employees have more aware compared to others, but only mere differences. Professional degree and post- graduate holders are more aware on purpose of merger and on settlement. Female employees are more aware on purpose of merger (Mean= 2.60, S.D.= .534) compared to male employees. While on settlement between banks male employees are more aware (Mean=2.29, S.D.=.633).

7.3.1 Type of bank employees and their awareness on merger

Researcher wants to know the awareness of employees on purpose and on settlement between banks as a part of merger is dependent of type of bank (bidder and target bank). To test the hypothesis chi-square test has to be performed.

$H_{7.1}$: *Employees awareness on purpose of merger is dependent of type of bank.*

$H_{7.2}$: *Employee's awareness regarding settlement between banks as a part of merger is dependent of type of bank.*

Table 7.3

Type of bank employees and their awareness on merger

Level of awareness		Type of bank SBI	Type of bank SBT	χ^2	df	P value	Remarks
Awareness on purpose of merger	Fully aware	3 (68)	11 (58)	4.042	2	.133	Insignificant
	Slightly aware	37 (29.6)	73 (36.5)				
	Not aware	85 (2.4)	116 (5.5)				
	Total	125 (100)	200 (100)				
Awareness on settlement	Fully aware	49 (39.2)	78 (39)	.018	2	.991	Insignificant
	Slightly aware	61 (48.8)	97 (48.5)				
	Not aware	15 (12)	25 (12.5)				
	Total	**125 (100)**	200 (100)				

Source: Field survey
Note:1. The value within bracket refers to Row percentage

The table 7.3 reports the results of chi-square test. The analysis result shows there is no statistically significant association ($\chi^2(2) = 4.042$, $P > 0.5$) between employee's awareness regarding purpose of merger and type of bank. Hence the alternative hypothesis failed to accept. It can be concluded that employee's awareness on purpose of merger is independent of type of bank.

From the analysis it can also found that there is no significant association ($\chi^2(2)$ = .018, $p > .05$) between employee's awareness on settlement between banks as a part of merger and type of bank. Hence alternative hypothesis failed to accept. Employee's awareness regarding settlement between banks as a part of merger is independent of type of banks.

Both the hypotheses are insignificant. Since p value for both hypotheses are greater than .05, the alternative hypotheses are failed to accept.

7.3.2 Designation of employees and their awareness on merger

Employee's designation may associate their awareness on merger. Researcher assumes that top level employees may have more aware on merger compared to others. To analyse the hypotheses Pearson's chi-square test has to be performed.

$H_{7.3}$: Designation of employees and their awareness on purpose of merger are associated.

$H_{7.4}$: Designation of employees and their awareness on settlement between banks as a part of merger are dependent.

Table 7.4

Designation of employees and their awareness on merger

Level of awareness		Designation						χ^2	df	P value	Remarks
		Junior Associate	Senior Associate	Chief Associate	Assistant Manager	Deputy Manager	Chief Manager				
Awareness on purpose of merger	Fully aware	51 (56)	46 (62.2)	29 (59.2)	29 (60.4)	29 (72.5)	17 (73.9)	9.138	10	.519	Insignificant
	Slightly aware	33 (36.3)	24 (32.4)	18 (36.7)	18 (37.5)	11 (27.5)	6 (26.1)				
	Not aware	7 (7.7)	4 (5.4)	2 (4.1)	1 (2.1)	0 (0)	0 (0)				
Awareness on settlement	Fully aware	28 (30.8)	29 (39.2)	21 (42.9)	22 (45.8)	16 (40)	11 (47.8)	9.242	10	.509	Insignificant
	Slightly aware	49 (53.8)	32 (43.2)	24 (49)	21 (43.8)	21 (52.5)	11 (47.8)				
	Not aware	14 (15.4)	13 (17.6)	4 (8.2)	5 (10.4)	3 (7.5)	1 (4.3)				

Source: Field survey

Note:1. The value within bracket refers to Row percentage

From the analysis regarding table 7.4, it can be concluded that there is no significant association (Chi-square (10) = 9.138, $p > .05$) between designation and employees' awareness on the purpose of merger. Hence null hypothesis has been retained. Designation of employees and their awareness on merger are independent.

Further, since p value is greater than .05, designation of employees and their awareness on settlement banks as a part of merger are independent. Here the alternative hypothesis is failed to accept. It can be concluded that there is no association between designation and employee's awareness on settlement between banks.

7.3.4 Educational qualification and employees' awareness

Educational qualification of employee's may be dependent on their awareness on merger, therefore, to check the association chi-square test has to be performed.

$H_{7.5}$: *Educational qualification and employees' awareness regarding purpose of merger are associated.*

$H_{7.6}$: *Educational qualification and employees' awareness on settlement between banks are associated.*

Table 7.5

Educational qualification and employees' awareness.

Level of awareness		Educational qualification			χ^2	df	P value	Cramer's V	Remarks
		Graduate	Post graduate	Professional degree					
Awareness on purpose of merger	Fully aware	92 (53.5)	63 (70.0)	46 (73)	16.407	4	.003**	.159	Highly significant
	Slightly aware	67 (39.0)	27 (30.0)	16 (25.4)					
	Not aware	13 (7.6)	0 (0)	1 (1.6)					
Awareness on settlement	Fully aware	61 (35.5)	38 (42.2)	28 (44.4)	4.186	4	.381		Insignificant
	Slightly aware	89 (51.7)	44 (48.9)	25 (39.7)					
	Not aware	22 (12.8)	8 (8.9)	10 (15.9)					

Source: Field survey

Note:1. The value within bracket refers to Row percentage

2. ** denotes significance at 1%

The table 7.5 reports the results of Chi- square test. With regard to awareness on purpose of merger, p value is less than .01, the alternative hypothesis is accepted at 1% level of significance. Hence concluded that there is statistically highly significant association between employee's educational qualification and level of Awareness with regard to purpose of merger. To measure the strength of the association, applies Chramer's V. Since Chramer's V value > 0.15, the association between employee's educational qualification and level of Awareness with regard to purpose of merger is strong. From the analysis, Professional degree holders are highly aware about purpose of merger (fully aware-73%, slightly aware- 25.4% and not aware- 1.6%) followed by post graduates (fully aware- 70%) and graduates (fully aware- 53.5%). compared to professional degree holders and post graduates, graduates are less aware on the purpose of merger.

While checking employee's awareness on settlement between banks as a part of merger, the p value is greater than .05, hence alternative hypothesis is failed to accept. It concludes that employee's educational qualification and their awareness on settlement between banks are independent.

7.3.5 Employees experience and their awareness on merger

Experience of employees may be associated on their awareness on merger. Higher experienced employees may have more awareness on merger. To test the hypothesis chi-square test has to be performed.

$H_{7.7}$: Experience and employees' awareness on purpose of merger are associated.

$H_{7.8}$: Experience and employees' awareness on settlement between banks are associated.

Table 7.6

Employees experience and their awareness on merger

Level of awareness		Experience (in years)					χ^2	df	P value	Remarks
		Below 5	6-10	11-20	21-30	Above 31				
Awareness on purpose of merger	Fully aware	29 (58)	84 (64.6)	47 (61.8)	21 (60)	20 (58.8)	1.947	8	.983	Insignificant
	Slightly aware	19 (38)	40 (30.8)	27 (35.5)	12 (34.3)	12 (35.3)				
	Not aware	2 (4)	6 (4.6)	2 (2.6)	2 (5.7)	2 (5.9)				
	Total	**50 (100)**	**130 (100)**	**76 (100)**	**35 (100)**	**34 (100)**				
Awareness on settlement	Fully aware	13 (26)	56 (43.1)	30 (39.5)	14 (40)	14 (41.2)	4.994	8	.758	Insignificant
	Slightly aware	29 (58)	59 (45.4)	38 (50)	16 (45.7)	16 (47.1)				
	Not aware	8 (16)	15 (11.5)	8 (10.5)	5 (14.3)	4 (11.8)				
	Total	**50 (100)**	**130 (100)**	**76 (100)**	**35 (100)**	**34 (100)**				

Source: Field survey
Note:1. The value within bracket refers to Row percentage

From the table 7.6, it is clear that employee's experience and their awareness on purpose of merger and settlement between banks are independent. In both cases p value is greater than .05, hence alternative hypothesis failed to accept. It concludes that there is no change in awareness level according to experience of employees.

7.4 Pre and Post- merger apprehension of employees

Researcher has taken 18 variables that have an influence on apprehension of employees regarding merger during pre and post- period in discussion with experts in the field of banking and through extensive literature review. The variables are listed below.

Table 7.7

Factors leading to apprehension of employees regarding merger in pre and post period

Sl. No.	Factors	Source
1.	Communication gap from the top management	(Kalaichelvan, 2011)
2.	Job uncertainty	(Gaur, 2016)
3.	Job loss	(Gaur, 2016)
4.	Stress& confusion	By discussion with experts in the field
5.	Loss of identity	By discussion with experts in the field
6.	Afraid of Transfer	By discussion with experts in the field
7.	Insecurity regards to the job	By discussion with experts in the field
8.	Changes in power, status, prestige.	(Gaur, 2016)
9.	Change in work culture	(Gaur, 2016)
10.	Change in work environment	(Gaur, 2016)
11.	Technological changes	(Gaur, 2016)
12.	Workload	By discussion with experts in the field

Sl. No.	Factors	Source
13.	Change of branch	(Gaur, 2016)
14.	Non- competent due to merger	(Gaur, 2016)
15.	Demotion	(Gaur, 2016)
16.	Change in salary& other monetary benefits	(Gaur, 2016)
17.	Improper Information about process of merger	(Kalaichelvan, 2011)
18.	Possibility of positioning SBI in global banks.	(Kalaichelvan, 2011)

In order to identify the importance of each factor and its dimensions, all these factors are analysed by using Principal Component Analysis. The Result is presented below.

Table 7.8

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.		.926
Bartlett's Test of Sphericity	Approx. Chi-Square	3558.238
	df	153
	Sig.	.000

Before performing factor analysis, adequacy of data for the purpose of factor analysis has to be tested. KMO test and Bartlett's test are using for testing sample adequacy. For the KMO statistic the value is 0.926, which is well above the minimum criterion of .5 and falls into the range of 'marvellous', so the sample size is adequate for the factor analysis. Bartlett's test of sphericity measures whether the original correlation matrix is significantly different from an identity matrix (Field, 2016). The significance level gives the result of the test. Here, the significance value is .000 ($p<.001$) which indicates that there exist significant relations among the variables. Hence, the data is adequate for factor analysis.

The next procedure is to determine which factors to retain which to discard. Factors with 'Eigen values' greater than one is taken as rule of thumb. By default, SPSS uses

Kaiser's criterion of retaining factors with eigenvalues greater than one (Field, 2016). Principal Component Analysis is used for the purpose of extraction and Varimax rotation is used for rotation, which is the standard rotation method. The resulting component matrix then rotated orthogonally using the varimax rotation algorithm to reduce the convenience factors to three. All of the factors are loaded on the three factors after the rotation. The results are reported in separate table.

Table 7.9

Total Variance Explained on factors leading to apprehension of employees regarding merger in pre-&post period.

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1.	8.536	47.424	47.424	5.203	28.906	28.906
2.	1.7430	9.683	57.107	4.147	23.039	51.945
3.	1.155	6.418	63.525	2.084	11.58	63.525
4.	0.946	5.257	68.782			
5.	0.729	4.052	72.835			
6.	0.627	3.482	76.317			
7.	0.585	3.249	79.566			
8.	0.496	2.756	82.322			
9.	0.460	2.553	84.875			
10.	0.453	2.518	87.393			
11.	0.423	2.352	89.745			
12.	0.376	2.087	91.833			
13.	0.329	1.828	93.661			
14.	0.295	1.638	95.299			
15.	0.248	1.378	96.677			
16.	0.224	1.245	97.921			
17.	0.200	1.114	99.035			
18.	0.174	0.965	100			

From the 18 factors only 3 factors have Eigen value more than one. This indicates that these 3 factors can be used to explain maximum variance of apprehension of employees. The total variance accounted by all the three factors is 63.525 percent. This means that significant amount of variance is explained by three factors. Hence, for making further analysis it is better to take three variables alone. 47.424 percent variance account for the first factor alone.

Table 7.10

Rotated component matrix of factors leading to apprehension of employees in pre- &post- merger period.

Factors	Components		
Demotion	.851		
Non- competent due to merger	.778		
Change in salary& other monetary benefits	.743		
Job loss	.703		
Technological changes	.670		
Insecurity regards to the job	.661		
Change of branch	.593		
Loss of identity	.555		
Change in work culture		.825	
Change in work environment		.710	
Job uncertainty		.695	
Changes in power, status, prestige.		.614	
Afraid of Transfer		.612	
Stress& confusion		.569	
Workload		.561	
Information about process of merger			.817
Communication from top management			.768
SBI at the league of global banks			.689

Three factors are extracted from the rotated component matrix (Table 7.10). From the matrix it is clear that the first factor is having eight statements, second factor is having seven items and third factor is having three statements. Based on the statements included it can be named as; 1) Psychological apprehensions, 2) Social& cultural apprehensions and 3) Corporate& professional apprehensions.

Strength of factors leading to apprehension of employees in pre-&post- merger period.

By using factor analysis, 18 items are extracted into three main components such as psychological apprehension, Social& cultural apprehension and Corporate& professional apprehension. The following table shows the descriptive statistics of 18 factors under three dimensions. Statements are scaled on Likert 5-point scale. Statements consists both positive and negative, for the analysis purpose statements have to be transformed into a unique base, hence positive statements are transformed to negative statements, here, Strongly Agree coded as 5, Agree as 4, Neutral as 3, Disagree as 2& strongly disagree as1.

Table 7.11

Strength of factors leading to apprehension of employees in pre-&post- merger period.

Variables	Pre- merger experience		Post- merger experience	
	Mean	S. D.	Mean	S.D.
Psychological apprehension	**2.157**	**.941**	**2.504**	**.804**
Fear of demotion	1.98	1.105	2.66	1.089
Fear of being non- competent due to merger	2.07	1.096	2.46	1.174
Fear of change in salary& other monetary benefits	2.10	1.171	2.57	.994
Fear of job loss	1.94	1.211	2.30	1.223
Afraid of technological changes	2.11	1.186	2.55	1.197
Insecurity regards to job	2.14	1.235	2.29	1.155

Variables	Pre- merger experience		Post- merger experience	
	Mean	S. D.	Mean	S.D.
Fear about changes of the branch	2.59	1.336	2.77	1.252
Loss of identity	2.33	1.345	2.43	1.194
Social& cultural apprehension	**2.743**	**1.049**	**2.843**	**.947**
Anxious about changes in work culture	3.20	1.392	3.20	1.242
Scared of changes in work environment	2.76	1.346	3.21	1.214
Job uncertainty	3.16	1.230	2.70	1.272
Worried about changes in Power, status& prestige	2.39	1.283	2.28	1.147
Afraid of transfer	2.56	1.447	2.52	1.292
Stressed& confused	2.46	1.360	2.76	1.286
Upset on increment of workload	2.66	1.351	3.24	1.394
Corporate& professional apprehension	**2.892**	**.991**	**2.549**	**.956**
Lack of communication about the merger plan	3.00	1.218	2.62	1.145
Insufficient information on process of merger	2.97	1.210	2.69	1.106
SBI doesn't come under the league of world banks	2.71	1.358	2.34	1.180
Over all apprehension (psychological+ Social& cultural+ Corporate& professional)	**2.507**	**.856**	**2.643**	**.818**

Source: Field Survey

Table 7.11 shows the descriptive statistics of pre and post- merger apprehensions of employees. In bird's eye view, employees have not much apprehension regarding merger in both pre and post- merger period. They experienced merger in a positive way. They have little anxiety in change in work culture in both phases. In post-merger period employees are scared on change in work environment. Also, they have uncertainty on their job in pre-merger period. For all other factors they have not much worried. By analysing over all apprehension of employees towards merger in pre and post- merger phase it can be analysed that employees haven't much apprehension in both periods.

❖ Even though employees don't have much apprehension in both period as a whole, the researcher tries to analyse if there is any difference in apprehension of employees by type of bank employees, gender, designation, educational qualification, age group and job experience.

7.4.1 Comparison of pre and post-merger apprehensions of Bidder and target bank employees

The bidder (SBI) and target bank (SBT) employees work culture and work style were different and they were different in other matters too. Researcher assumes that bidder bank employees have more problems due to merger. Though, an analysis is done to check whether significant difference in the pre and post-merger apprehension of SBI and SBT employees. An Independent sample t-test has been performed.

$H_{7.9}$: *Psychological apprehension of bidder and target bank employees are significantly different in pre-merger period.*

$H_{7.10}$: *There is a significant difference in the pre-merger social and cultural apprehension of bidder and target bank employees.*

$H_{7.11}$: *Corporate& professional apprehension of SBI& SBT bank employees are significantly different in pre-merger period.*

$H_{7.12}$: *There is a significant difference between bidder and target bank employees with regard to post-merger psychological apprehension.*

$H_{7.13}$: *There is a significant difference between bidder and target bank employees with regard to post-merger social & cultural apprehension.*

$H_{7.14}$: *There is a significant difference between bidder and target bank employees with regard to post-merger corporate& professional apprehension.*

$H_{7.15}$: *Pre-merger over all apprehension of employees is significantly different with the type of bank.*

$H_{7.16}$: *Post-merger over all apprehension of employees is significantly different with the type of bank.*

Table 7.12

Pre and post-merger apprehension on Employees wise

Factors		Type of Bank	Mean	S.D.	t value	df	p value	Homogeneity	Remarks
Pre-merger apprehension	Psychological	SBI	1.840	.854	-4.975	323	.000**	Equal variance assumed	Highly significant
		SBT	2.355	.939					
	Social& cultural	SBI	2.269	.980	-6.875	263.45	.000**	Equal variance not assumed	Highly significant
		SBT	3.038	.981					
	Corporate& professional	SBI	2.738	.917	-2.222	323	.027*	Equal variance assumed	Significant
		SBT	2.988	1.025					
	Overall apprehension	SBI	2.157	.754	-6.158	323	.000**	Equal variance assumed	Highly significant
		SBT	2.726	.845					
Post- merger apprehension	Psychological	SBI	2.236	.738	-4.92.0	323	.000**	Equal variance assumed	Highly significant
		SBT	2.672	.799					
	Social& cultural	SBI	2.477	.871	-5.766	323	.000**	Equal variance assumed	Highly significant
		SBT	3.071	.922					
	Corporate& professional	SBI	2.266	.786	-4.318	323	.000**	Equal variance assumed	Highly significant
		SBT	2.725	1.011					
	Overall apprehension	SBI	2.335	.729	-5.616	323	.000**	Equal variance assumed	Highly significant
		SBT	2.836	.813					

Source: Survey data

Note: 1. ** denotes significance at 1%

2. * denotes significance at 5%

From the table 7.12 it is evident that all alternative hypotheses are accepted. The merger experience of bidder and target bank employees are statistically significantly differed. In case of pre- merger psychological and social& cultural apprehensions are statistically highly significant at 1% level of significance and corporate& professional apprehension is statistically significant at 5% level of significance. In post- merger period all factors are statistically highly significant at 1% level of significance. The overall apprehension of employees towards merger in pre and post-merger period is statistically highly significant with regards to type of bank. Hence, it is concluding that there is statistically significant difference between SBI and SBT employees with regards to their apprehension in pre and post- merger period.

While considering the mean values, it is clear that SBI employees do not have apprehension regarding merger during pre and post-merger periods. But SBT (Target Bank) employees opined that, they faced a little apprehension in both periods.

7.4.2 Gender wise comparison of pre and post- merger apprehension of employees.

Apprehension of employees towards merger may change according to their gender. Researcher assumes that female employees may have more apprehension towards merger than male employees. Though, independent sample t test has to be performed to check whether there is any difference in the apprehension of employees on the basis of gender.

$H_{7.17}$: Male and female employees are significant difference on their pre-merger psychological apprehension.

$H_{7.18}$: Pre-merger social& cultural apprehension is significantly different with regard to gender.

$H_{7.19}$: There is significant difference between male and female with respect to pre-merger corporate and professional apprehension of employees.

$H_{7.20}$: There is significant difference between male and female with respect to post-merger psychological apprehension of employees.

$H_{7.21}$: There is significant difference between male and female with respect to post-merger social and cultural apprehension of employees.

$H_{7.22}$: There is significant difference between male and female with respect to post-merger corporate and professional apprehension of employees.

$H_{7.23}$: There is significant difference between male and female with respect to overall pre-merger apprehension of employees.

$H_{7.24}$: There is significant difference between male and female with respect to overall post-merger apprehension of employees.

To test the hypotheses independent sample t test has been performed.

Table 7.13

Gender wise Comparison of pre-merger and post- merger apprehension of employees

Factors		Gender	Mean	S.D.	t value	df	p value	Homogeneity	Remarks
Pre-merger experience	Psychological	Male	2.159	.964	.056	323	.956	Equal variance assumed	Insignificant
		Female	2.153	.913					
	Social& cultural	Male	2.798	1.111	1.106	317.49	.269	Equal variance not assumed	Insignificant
		Female	2.670	.958					
	Corporate& professional	Male	2.955	1.105	1.367	322.75	.173	Equal variance not assumed	Insignificant
		Female	2.809	.813					
	Overall apprehension	Male	2.540	.905	.811	316.64	.418	Equal variance not assumed	Insignificant
		Female	2.464	.788					
Post-merger experience	Psychological	Male	2.555	.863	1.336	320.13	.183	Equal variance not assumed	Insignificant
		Female	2.437	.717					
	Social& cultural	Male	2.947	1.002	2.333	318.41	.020*	Equal variance not assumed	Significant
		Female	2.706	.854					
	Corporate& professional	Male	2.605	1.050	1.274	322.83	.204	Equal variance not assumed	Insignificant
		Female	2.474	.813					
	Overall apprehension	Male	2.715	.883	1.888	321.34	.060	Equal variance not assumed	Insignificant
		Female	2.548	.717					

Source: Field survey

Note: 1. * denotes significance at 5%

From the table 7.13 reports the results of independent sample t test. Only in the case of post-merger social& cultural apprehension there is statistically significant difference in between male and female employees($p<.05$), hence accepted alternative hypothesis. While analysing mean male employees have mere problems in their social& cultural factors compared to female employees, it may be due to their dominance in society and family. In all other cases p value is greater than .05, hence alternative hypotheses are failed to accept, there is no statistically significant difference between male and female employees on their apprehension towards merger.

7.4.3 Designation wise comparison of pre and post-merger apprehension of employees

Employees apprehension may change according to their designation wise. Researcher assumes that top level employees may have less apprehension towards merger compared to others. To analyse if there is any significant difference in the apprehnsion of employees on the basis of designation, ANOVA test has to be performed.

$H_{7.25}$: There is significant difference between employee's designation towards pre-merger psychological apprehension.

$H_{7.26}$: There is significant difference between employee's designation towards pre-merger Social& cultural apprehension.

$H_{7.27}$: There is significant difference between employee's designation towards pre-merger Corporate& professional apprehension.

$H_{7.28}$: There is significant difference between employee's designation towards post-merger psychological apprehension

$H_{7.29}$: There is significant difference between employee's designation towards post-merger Social& cultural apprehension

$H_{7.30}$: There is significant difference between employee's designation towards post-merger Corporate& professional apprehension.

$H_{7.31}$: Pre- merger Overall apprehension of employees different on designation wise.

$H_{7.32}$: Post- merger Overall apprehension of employees different on designation wise.

Table 7.14

Comparison of apprehension of employees on Designation wise

Experience		Employee's Designation						F value	p value
		Junior Associate	Senior Associate	Chief Associate	Assistant Manager	Deputy Manager	Chief Manager		
Pre-merger	psychological	2.425 (.899)	2.268 (1.062)	2.176 (1.004)	1.838 (.645)	2.006 (.935)	1.625 (.661)	4.717	.000**
	Social& cultural	2.936 (.924)	2.911 (1.141)	2.615 (1.119)	2.568 (.912)	2.650 (1.115)	2.236 (1.014)	2.608	.025*
	Corporate& professional	3.018 (.903)	2.964 (.935)	3.013 (1.056)	2.722 (.938)	2.700 (1.129)	2.594 (1.145)	1.530	.180
	Overall apprehension	2.722 (.791)	2.634 (.932)	2.486 (.952)	2.270 (.649)	2.372 (.866)	2.024 (.704)	4.066	.001**
Post-merger	psychological	2.739 (.704)	2.583 (.797)	2.474 (.911)	2.296 (.800)	2.375 (.714)	2.043 (.706)	4.263	.001**
	Social& cultural	3.130 (.921)	2.886 (.971)	2.699 (1.026)	2.681 (.922)	2.725 (.779)	2.416 (.864)	3.388	.005**
	Corporate& professional	2.780 (.890)	2.621 (.928)	2.666 (1.197)	2.215 (.829)	2.325 (.914)	2.231 (.748)	3.549	.004**
	Overall apprehension	2.898 (.771)	2.707 (.815)	2.594 (.949)	2.433 (.766)	2.503 (.713)	2.220 (.704)	4.188	.001**

Source: Field survey

Note: 1. The value within bracket refers to SD

2. ** denotes significance at 1%

3. * denotes significance at 5%

From the table 7.14 it is evident that employee's designation is statistically significant difference on their apprehension towards merger in pre and post- merger period except in the case of pre-merger corporate& professional apprehension.

Scheffe test of Post Hoc multiple comparison shows that the difference between in pre- merger psychological apprehension of junior associate with assistant manager and chief manager. In case of post-psychological apprehension, the difference prevailing in junior associate and chief manager. It is observed in the analysis that Junior associate and assistant manager differed in case of post- merger corporate and professional apprehension. In all other cases there is no significant difference among apprehension of employees on designation wise.

In case of overall apprehension, junior associates and chief associates are significantly different on their apprehension towards merger in pre and post- merger period at 5% level of significance. As researcher assumed top level managers have less apprehension towards merger compared to officers.

7.4.5 Employee's Educational qualification and merger apprehension

Educational qualification of employees may effect on their apprehension towards merger. To test is there any significant difference in experience of employees towards merger on educational qualification wise, ANOVA test has to be performed.

$H_{7.33}$: *There is significant difference in the pre- merger psychological apprehension of employees with regard to educational qualification.*

$H_{7.34}$: *There is significant difference in the pre- merger social& cultural apprehension of employees with regard to educational qualification.*

$H_{7.35}$: *There is significant difference in the pre- merger corporate& professional apprehension of employees with regard to educational qualification.*

$H_{7.36}$: *There is significant difference in the post- merger psychological apprehension of employees with regard to educational qualification.*

H7.37: There is significant difference in the post- merger social& cultural apprehension of employees with regard to educational qualification.

H7.38: There is significant difference in the post- merger corporate& professional apprehension of employees with regard to educational qualification.

H7.39: Pre-merger overall apprehension of employees significantly different on educational qualification.

H7.40: Post-merger overall apprehension of employees significantly different on educational qualification.

Table 7.15

Pre and post-merger apprehension and educational qualification

Experience		Designation			F value	p value
		Graduation	Post-graduation	Professional degree		
Pre-merger	psychological	2.336 (1.009)	1.843 (.710)	2.115 (.924)	8.591	.000**
	Social& cultural	2.804 (1.058)	2.543 (.866)	2.862 (1.223)	2.353	.097
	Corporate& professional	2.944 (1.025)	2.725 (.879)	2.898 (1.033)	1.811	.165
	Overall apprehension	2.619 (.900)	2.262 (.635)	2.551 (.945)	5.386	.005**
Post-merger	psychological	2.595 (.835)	2.261 (.685)	2.603 (.813)	5.858	.003**
	Social& cultural	2.873 (.947)	2.611 (.828)	3.093 (1.039)	5.107	.007**
	Corporate& professional	2.616 (1.015)	2.311 (.713)	2.703 (1.038)	4.116	.017*
	Overall apprehension	2.707 (.840)	2.406 (.677)	2.810 (.880)	5.794	.003**

Source: Field survey
Note: 1. The value within bracket refers to SD
2. ** denotes significance at 1%
3. * denotes significance at 5%

The table 7.15 Reports the results of one-way ANOVA, from the analysis it is evident that there is statistically difference among designation of employees ($p<.01$) with regard to pre-merger psychological apprehension. Based on Scheffe test of Post Hoc multiple comparison, graduates are significantly different with post- graduates at 1% level of significance.

There is no significance difference among designation of employees with regard to the pre-merger social& cultural apprehension and corporate& professional apprehension, since p value is greater than .05, the alternative hypothesis is failed to accept.

While considering post- merger apprehension, since p value is less than .01, alternative hypotheses are accepted at 1% level with regard to post- merger psychological and post- merger social& cultural apprehensions. Hence there is significance difference among designation of employees with regard to the post-merger apprehnsion of psychological and social& cultural apprehensions. Based on Scheffe test of Post Hoc multiple comparison, graduates are significantly different with post-graduates and professional degree.

Post- merger corporate& professional apprehension is significantly different regard to designation of employees at 5% level of significance ($p<.05$), hence alternative hypothesis accepted at 5% level of significance. Based on Scheffe test of Post Hoc multiple comparison, post graduates are significantly different with graduates and professional degree holders.

While analysing overall apprehension of employees in pre and post- merger period statistically difference on educational qualification wise at 1% level of significance. Scheffe test of post hoc multiple comparison indicates graduates' apprehension is significantly different with post graduates in pre-merger period and post graduates' apprehension is different with graduates and professional degree holders in post-merger phase. By analysing mean post graduates have little apprehension towards merger (Mean= 2.262, S.D.= .635) compared to graduates (Mean= 2.619, S.D.= .900) in pre-merger. In case of post- merger, post graduates have less apprehension towards merger compared to graduates and professional degree holders.

7.4.6 Job experience wise comparison of merger apprehension of employees

Job experience of employees have an impact on their apprehension towards merger. Researcher assumes that experienced employees may have less apprehension towards merger than newly appointed. To check the hypotheses one way ANOVA has to be performed.

$H_{7.41}$: There is significant difference in pre-merger psychological apprehension of employees on the basis of job experience.

$H_{7.42}$: There is significant difference in pre-merger social and cultural apprehension of employees on the basis of experience.

$H_{7.43}$: There is significant difference in pre-merger professional& cultural apprehension of employees on the basis of experience.

$H_{7.44}$: There is significant difference in post-merger psychological apprehension of employees on the basis of experience.

$H_{7.45}$: There is significant difference in post-merger social& cultural apprehension of employees on the basis of experience.

$H_{7.46}$: There is significant difference in post-merger corporate& professional apprehension of employees on the basis of experience.

$H_{7.47}$: There is significant difference in pre-merger overall apprehension of employees on the basis of experience.

$H_{7.48}$: There is significant difference in post-merger overall apprehension of employees on the basis of experience.

Table 7.16

Pre and post- merger apprehension of employees and job experience

Experience		Job Experience (in years)					F value	p value
		Below 5	6-10	11-20	21-30	Above 31		
Pre-merger	psychological	2.382 (.855)	2.041 (.913)	2.059 (.933)	2.314 (.994)	2.323 (1.067)	1.949	.102
	Social& cultural	2.922 (.858)	2.703 (1.061)	2.652 (1.097)	2.824 (1.144)	2.747 (1.063)	.607	.658
	Corporate& professional	2.813 (.898)	2.917 (.937)	2.811 (1.064)	2.847 (1.048)	3.137 (1.101)	.762	.550
	Overall attitude	2.664 (.763)	2.445 (.829)	2.415 (.874)	2.602 (.935)	2.624 (.952)	1.079	.367
Post-merger	Psychological	2.727 (.718)	2.461 (.794)	2.394 (.812)	2.471 (.788)	2.617 (.924)	1.602	.174
	Social& cultural	3.225 (.850)	2.815 (1.001)	2.757 (.853)	2.543 (.903)	2.886 (.987)	3.206	.013*
	Corporate& professional	2.673 (.842)	2.502 (.915)	2.447 (.971)	2.514 (1.007)	2.804 (.956)	1.121	.347
	Overall attitude	2.912 (.723)	2.606 (.832)	2.545 (.779)	2.506 (.816)	2.753 (.924)	2.121	.078

Source: Field survey

Note: 1. The value within bracket refers to SD

2. * denotes significance at 5%

From the table 7.16 it is inferred that, post-merger social& cultural apprehension only have significance difference regard to job experience of employees, since p value is less than .05, alternative hypothesis is accepted at 5% level of significance. All other factors are not significance difference with regard to employee's job experience.

Based on Scheffe test of Post Hoc multiple comparison, the experience group of Below 5 years is significantly differ with experience group of 21-30 years at 5% level of significance.

Overall apprehension of employees is not significance difference on the basis of job experience in both pre and post- merger period. The alternative hypotheses are failed to accept at 5% level of significance.

7.4.7 Age wise comparison of merger apprehension of employees

Researcher made an attempt to test is there any difference in apprehension of employees towards merger regard to age group. To test the hypotheses, One- way ANOVA has to be performed.

$H_{7.49}$: There is significant difference in the pre- merger psychological apprehension of employees with regard to age group.

$H_{7.50}$: There is significant difference in the pre- merger social& cultural apprehension of employees with regard to age group.

$H_{7.51}$: There is significant difference in the pre- merger corporate& professional apprehension of employees with regard to age group.

$H_{7.52}$: There is significant difference in the post- merger psychological apprehension of employees with regard to age group.

$H_{7.53}$: There is significant difference in the post- merger social& cultural apprehension of employees with regard to age group.

$H_{7.54}$: There is significant difference in the post- merger corporate& professional apprehension of employees with regard to age group.

$H_{7.55}$: Pre- merger Overall apprehension of employees significantly difference with regard to experience.

$H_{7.56}$: Post- merger Overall apprehension of employees significantly difference with regard to experience.

Table 7.17

ANOVA for testing significant difference among age group with respect to apprehension of employees towards merger.

Experience		Age group in years				F value	p value
		21-30	31-40	41-50	51-60		
Pre-merger	Psychological	2.345 (.915)	1.988 (.855)	2.324 (1.071)	2.202 (.982)	3.007	.031*
	Social& cultural	2.907 (.957)	2.623 (.993)	2.873 (1.267)	2.737 (1.041)	1.408	.240
	Corporate& professional	2.984 (.947)	2.839 (.925)	2.759 (1.150)	3.024 (1.025)	1.039	.375
	Overall apprehension	2.670 (.831)	2.377 (.749)	2.610 (1.072)	2.547 (.874)	2.169	.092
Post-merger	Psychological	2.742 (.789)	2.361 (.752)	2.627 (.837)	2.487 (.846)	3.828	.010**
	Social& cultural	3.253 (.947)	2.696 (.876)	2.952 (1.014)	2.687 (.929)	6.149	.000**
	Corporate& professional	2.763 (.910)	2.411 (.862)	2.543 (1.074)	2.642 (1.051)	2.257	.082
	Overall apprehension	2.944 (.806)	2.499 (.747)	2.739 (.877)	2.591 (.857)	4.750	.003**

Source: Field survey
Note: 1. The value within bracket refers to SD
2. ** denotes significance at 1%
3. * denotes significance at 5%

The table 7.17 reports the results of One- way ANOVA, p value is less than .01 with regard to post- merger psychological and social& cultural apprehension, hence alternative hypothesis is accepted at 1% level of significance. Based on Scheffe test of Post Hoc multiple comparison, in case of post- merger psychological apprehension, age group 21-30 is significantly different from age group of 31-40 at 5% level of significance. By considering post-merger social& cultural apprehension, the age group of 21-30 is significantly differ with 31-40 and 51-60 age group. By considering mean value the age group 21-30 (Mean= 3.253, S.D.=.947) is greater than 31-40 and

51-60 age groups. This means younger employees have social& cultural apprehension in post- merger period towards merger compared to aged employees.

By analysing overall apprehension of employees in pre- merger period there is no significance difference on the basis of age, hence alternative hypothesis failed to accept. In post- merger period, p value less than .01, hence alternative hypothesis accepted at 1% level of significance. While considering scheffe test of post hoc age group 21-30 is significantly different with age group of 31-40. 31-40 age groups have little towards merger at post- merger period (Mean=2.499, S.D.= .747).

7.5 Comparison of difference in pre-merger apprehension and post- merger apprehension of employees

Researcher wants to identify is there any difference in the apprehension of employees in pre-merger and post-merger period. The employee's apprehension may be differed according to their expectation and experience. Researcher collected data from the employees on pre-merger apprehension and post- merger apprehension on the same statements. The apprehension of the merger may not be like as they expected. So, to find is there any difference in the pre- merger apprehension and post- merger apprehension, paired t- test has been performed.

$H_{7.57}$: *There is a significant difference in pre-merger apprehension and post-merger apprehension of employees on psychological apprehension.*

$H_{7.58}$: *There is a significant difference in the social& cultural apprehension of employees in pre-merger and post- merger.*

$H_{7.59}$: *There is a significant difference in the corporate& professional apprehension of employees in pre-merger and post- merger.*

$H_{7.60}$: *There is a significant difference between pre and post- merger overall apprehension of employees.*

Table 7.18

Employees apprehension on merger in pre and post- merger period

		Mean	S.D.	t value	Df	p value	Remarks
Psychological	Pre-merger	2.157	.941	-8.233	324	.000**	Highly significant
	Post-merger	2.504	.804				
Social& cultural	Pre-merger	2.743	1.049	-2.047	324	.041*	Significant
	Post- merger	2.843	.947				
Corporate& professional	Pre-merger	2.892	.991	7.841	324	.000**	Highly significant
	Post- merger	2.549	.956				
Overall apprehension	Pre-merger	2.507	.856	-3.805	324	.000**	Highly significant
	Post- merger	2.643	.818				

Source: Survey data
Note: 1. ** denotes significance at 1%
2. * denotes significance at 5%

The table reports the result of paired t test. From the analysis, it can be found that there is statistically significant difference in the pre and post-merger apprehension of employees, hence alternative hypotheses are accepted. While considering mean values, psychological apprehension, post- merger mean value is higher than pre-merger (pre-merger Mean= 2.157, S.D.=.941; post-merger Mean= 2.504, S.D.=.804). In case of social apprehension post- merger apprehension is higher mean value compared to pre-merger (pre-merger Mean=2.743, S.D.=1.049; post-merger Mean=2.843, S.D.=.947). Corporate and professional apprehension have higher mean value in pre-merger period while compared to post-merger apprehension (pre-merger mean=2.892, S.D.=.991; post-merger Mean=2.549, S.D.=.956). In case of overall apprehension mean value is higher in post- merger period (Pre- merger mean= 2.507, S.D.= .856; Post-merger mean= 2.643, S.D. =.818). The apprehension of employees in pre and post- merger period are low but when comparing the data of two periods separately the results show that there is a significant change in the apprehension level.

7.6 Employee's perception regarding change in job structure and benefits availed

After merger changes may be shown in employees job structure and their benefits availed. The degree to which the change is made shows below. The variables are scaled on 5- point scale. Decreased to a great extent coded as 1, decreased to some extent as 2, no change as 3, increased to some extent as 4 and increased to a great extent as 5.

Table 7.19

Descriptive statistics of change in job structure and benefits availed

Variables	Mean	S.D.
Salary	3.28	.586
Non-monetary/ Monetary benefits	3.24	.697
Workload	3.91	.781
Job stress	3.88	.833
Customer rush	3.72	.962
Customer complaint	3.91	.769
Number of staffs	2.13	.867

Source: Field survey

Table 7.19 discloses that the change in job structure of employees. By analysing the table, workload, job stress, customer rush and customer complaints are increased to some great extent after the merger. In case of salary and non- monetary benefits, seen little increment after the merger. Number of staffs in branches is decreased to some extent. The workload, customer rush and customer complaints are leads to job stress in employees. Most of the employees have the concerns regards to decrease in number of staffs in branches after the merger.

7.7 Employee's perception regarding the efficiency of bank

After the merger sea changes may happen in banks to improve the efficiency. The perception regarding the improved efficiency of bank depicted in the table 5. The variables are scaled on 5- point scale. Decreased to a great extent coded as 1, decreased to some extent as 2, no change as 3, increased to some extent as 4 and increased to a great extent as 5.

Table 7.20

Descriptive statistics of change in efficiency of bank

Variables	Mean	S.D.
Deposits	3.50	1.076
Loans& advances	3.55	1.098
No. of customers	3.75	1.023
Level of NPA	3.73	.909
Service charges	3.78	.792
Cross-selling	4.06	.763
No. of branches	2.76	1.323
No. of ATM counters	3.58	.999
Over-all performance of branch	3.51	1.198

Source: Field survey

The table 7.20 reports the employee's perception on improved efficiency of bank after the merger. Cross- selling is increased to a great extent after the merger (Mean 4.06, S.D .763). The primary functions of a bank are accepting deposits and granting loans& advances, after the merger amount of deposits and loans and advances increased to a some extent. Number of customers increased after the merger. One of the objectives of merger is to decline the NPA, while employees perceive that level of NPA is enhanced after the merger, it's a negative impact and also the service charges also increased. After the merger the number of branches were decreased, it may due to closure of some branches due to multiple branches in same place. Number of ATM counters increased to some extent. By considering the perception of over-all performance, it is increased to some extent.

7.8 Employees perception on growth& development opportunities of the bank after merger

After the merger changes may see in growth & development opportunities. Therefore, researcher analyse employees' perception on growth& development opportunities of the bank after the merger. The variables are scaled on 5- point Likert scale. Here, Strongly Agree coded as 5, Agree as 4, Neutral as 3, Disagree as 2& strongly disagree as1.

Table 7.21

Descriptive statistics of change in growth& development opportunities

Variables	Mean	S.D.
Technological advancements	3.49	1.129
Introduced innovative products& services	3.65	1.057
Change in regulation& controlling	3.78	.949

Source: Field survey

The table 7.21 depicts the descriptive statistics of employee’s perception on growth& development opportunities of the bank after the merger. Employees perceive that change has been made in regulation and controlling (Mean = 3.78, S.D.=.949) after the merger. Employees perceived that technology advanced after the merger and the bank introduced innovative products and services. They agreed to changes shown in accounting practices after the merger.

7.9 Conclusion

In conclusion, the human resource is the most important element in any organization. For the success of the organization should consider this element very carefully especially at the time of undergoing changes organically or inorganically. Majority doesn’t like to accept the changes, though timely intervention is needed for the better.

This chapter provides a detailed view of effect of merger of SBI on employees of bidder and target bank. From the study it can be inferred that the employees have much awareness regarding merger. From the analysis it can be found that the employees of both bidder and bank have not much apprehension during pre and post-merger period. However still the employees of target bank couldn’t completely adjust with the work culture in bidder bank. Though they could cope up with the merger to large extent. Majority of employees concern was shortage of staffs in the branch after the merger, it leads to workload, job stress, customer rush and customer complaints due to lack of timely services. Employees perceived that the amount of deposits, number of loans and advances, cross selling business were increased after the merger, it is a positive sign. In their perception level of NPA and service charges were increased after the merger, reducing NPA is one of the objectives of this merger. According to their perception changes is noticed in growth and development opportunities.

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CHAPTER 8

SUMMARY, FINDINGS AND CONCLUSION

8.1 Introduction

Mergers and acquisitions (M&As) are one of the most dramatic manifestations of corporate strategy (Puranam et al., 2000). It has become popular in India to use M&As as a means of restructuring corporate entities. The banks were made more efficient and viable through the banking sector reforms(Srinivas, 2011). The consolidation of banks through mergers and acquisitions constitutes an important outcome of the financial transformation process and a contemporary trend in the Indian banking sector (Kuriakose & Paul, 2016).

Indian banking sector underwent a series of M&As as a mission to build stronger, bigger banks. The history of mergers and acquisitions in Indian banking can be traced back to 1921 when the Bank of Bengal, the Bank of Bombay, and the Bank of Madras amalgamated to form Imperial Bank of India. Over the past few years, the banking industry has undergone numerous changes to meet international banking standards (*IBEF*, 2022).

State Bank of India (SBI) is the oldest bank of India. Currently, SBI is the largest commercial bank in India in terms of assets, deposits, branches, number of customers and employees. SBI started its journey over a 200 years ago, since the formulation of Bank of Calcutta in 1806. SBI being the largest and oldest bank in India, had undertaken a number of acquisitions from time to time. Its origins can be traced back to British India, when Bank of Bengal, Bank of Madras and Bank of Bombay merged to form Imperial Bank of India in 1921, which became the State Bank of India in 1955. The merger of SBI with its associates began fourteen years ago when SBI merged State Bank of Saurashtra with itself in 2008. In 2010, State Bank of Indore was also merged with the larger bank. SBI has since made repeated attempts to merge its units but none came to fruition due to a shortage of capital("Cabinet Approves Merger of Associates with State Bank - The Hindu," 2016).

SBI merged its remaining five associates and BMB by catapulted SBI among the top 50 global banks. The merger of SBI is done with much expectations and concerns in the minds of stakeholders. The stakeholders eagerly waiting for the results of this mega merger. This study aimed to analyse this ever-large scale in Indian banking sector in terms of financial performance, operational efficiency, shareholder's wealth and on employee's perception.

The last seven chapters discussed the problem under study, previous literature, methodology, theoretical overview and analysis and interpretation of the hypotheses. This chapter summarizes the study. It also includes the findings & conclusion of the study.

8.2 Research problem at a glance

One of the principal objectives behind the merger is to reap the benefits of economies of scale. Moreover, merger will shift SBI to the list of universal banks in terms of total assets, products and geographical diversification. Large banks are in a better position to introduce technology, high level of performance in terms of profitability and productivity and reduced cost than small banks. Rather than any profit motive aim, meeting the cut throat competition prevailing in the market is another agenda behind merger and acquisition. Hence in this context, detailed research to measure the effect of merger on performance of bidder bank should be analysed with the help of pre-merger and post-merger financial data released by the bidder bank. One of the objectives of merger was better scale efficiency hence, it is highly imperative to know the changes in the scale efficiency of SBI before and after the merger. This merger was a giant leap in the Indian economy, surely it will affect the share market positively or negatively, therefore a study is needed to analyse the effect of merger on the shareholders wealth. Increased level of nonperforming asset is the major challenge that many of banks are facing in the present- scenario. Hence the effect of merger on level of NPA also should be analyzed. Even though the government have brought this idea with much expectation, we could witness opposition and strikes from the side of employees especially employees of target banks towards merger. Hence the perception and apprehensions of employees towards the implication of merger should also be checked.

Therefore, this study tries to find out answers for these questions;

- Does SBI merger improve financial performance of merged entity?
- How much does it contribute in the reduction of Non- performing Asset?
- Does merger improve the operational efficiency of bank?
- Does the merger create value to the shareholders during the announcement period of merger and in long run?
- What are the apprehensions of employees towards merger in pre-& post- merger period?
- Whether any changes in the apprehensions of employees in pre- &post- merger period?
- Is there any difference in the apprehension of bidder and target bank employees towards merger?
- How far does the merger of SBI & its associates succeeded in achieving its predetermined objectives?

8.3 Objectives of the study

Following are the important objectives set for the study:

1. To identify the effect of merger of SBI with its associates on financial performance of bidder bank.
2. To examine the effect of merger of SBI on level of Non-Performing Assets (NPA) of bidder bank.
3. To measure the effect of merger of SBI on operational efficiency of bidder bank.

4. To measure the long-term and short- term effect of merger of SBI and its associates on shareholders' wealth.

5. To find out the apprehension of employees towards the implications of merger and compare the bidder and target bank employees during pre and post-merger period.

8.4 Significance of the study

On 1st April 2017, State Bank of India, which is India's largest Bank merged five associate banks and Bharatiya Mahila Bank with itself. This is the first ever large-scale consolidation in the Indian Banking industry. With the merger SBI entered the league of top 50 global banks. In this context the study on the effect of merger on financial performance and operational efficiency of SBI have great significance. With the merger there will be effect on the shareholders' value, that changes needs to be addressed. The non-performing assets are problematic for banks, one of the objectives of merger is to reduce the level of NPA, through the merger the level of nonperforming assets will change, that change also needs to be studied. The employees are the key factor in every industry, they are the part and parcel of the smooth and efficient running of bank, so the human factor should be addressed. While an organisational change, the employees will affect it and they respond to it oppositely. In this case of merger of SBI, we witnessed the strikes and voluntary retirements from the part of employees, though a study is highly significant to address their problems regarding merger. Though the study entitled ***Effect of Merger of State Bank of India and its Associates in 2017- A Pre- Post Analysis*** is a contemporary topic which needs to be discussed.

8.5 Methodological design

The study was descriptive in nature. It has been conducted with the help of data collected from previous literatures, various reports of SBI, RBI etc. and from sample respondents. The study used both primary and secondary sources of data. The secondary sources of data included all published materials like books, journals, data from the website, Annual reports of SBI, NSE website etc. the primary source of data collection was the SBI employees in Kerala.

For secondary data analysis, four data sets had been used. The first data set consists of ratios under CAMELS variables for analysing financial performance during the period 2013- 14 to 2021-22. The second data set consists of data for analysing operating performance during the period 2012-13 to 2021 to 22. The third data set contains share price of SBI and NSE indices for analysing short term shareholders effect for the period 1st January 2016 to 10th April 2017. The final data set consists of data for analysing effect of merger on shareholders' wealth in long term for the period of 02-04-2012 to 30- 03-2022.

For primary data analysis, SBI employees in Kerala were taken. The population for the study was all the SBI employees working in Kerala. As per the report of SBI in 2018-19, 14131 employees are working in Kerala, which spread across 14 states in Kerala. Since the population was finite, the sample size was calculated with the formula for the finite population. 325 samples were finalised for the study.

Multistage random sampling is used for the selection of sample. In first stage randomly selected seven districts by using lottery method, the selected districts were Kannur, Calicut, Malappuram, Thrissur, Ernakulam, Trivandrum and Palakkad. In the second stage, from the selected districts SBI branches were selected in proportion to the number of branches in each district randomly by using lottery method. The entire employees from the selected branches are the sample for the study.

The primary data were collected with a structured questionnaire collected from SBI employees for getting factors leading to apprehension regarding merger and their perception on merger in pre and post- merger period. The questionnaire developed by reviewing literature, discussion with the SBI bank employees. It has been finalised with the help of expert advice in the field of statistics and finance. The questionnaire starts with the type of bank employees, employee's awareness regarding merger, their attitude towards merger, factors leading to apprehension of employees in pre and post-merger period, employee's perception on different aspects after the merger and ends with demographic factors.

The variables were analysed with the help of IBM SPSS Statistics 22, STATA, Max DEA and MS Excel. The statistical inferences were made based on the descriptive statistics like mean, frequency, standard deviation and tests like t-test, ANOVA, post-hoc test, DEA and event study methodology.

8.6 Chapter Schemes

The study is presented in 9 chapters. They are;

1. Introduction
2. Literature Review
3. Research Methodology
4. Mergers & Acquisitions in Indian Banking Sector: Theoretical framework
5. Effect of merger of SBI on the Financial performance and Operational Efficiency
6. Effect of merger of SBI on Shareholders' wealth
7. Effect of merger of SBI on Employees
8. Summary, Findings and Conclusion
9. Recommendations and Scope for Further Research

8.7 Limitations of the Study

- Among the associate banks, only SBT has taken for studying perception of employees.
- Non-cooperation from respondents to reveal information about merger.
- For measuring the effect of merger on financial performance and shareholders wealth, 5 years data has been taken. Since merger is a long-visioned endeavor, in long run the result may further change.

8.9 Findings

The major findings of the study are outlined below based on the objectives of the study.

8.9.1 Effect of merger on financial performance of SBI

1. Capital Adequacy Ratio (CAR) improved 0.75 % after the merger period. The ratio became 13.85% in the year 2021-22. capital adequacy ratios are higher than the standard ratio prescribed by Basel II and RBI guidelines, indicating that the bank is adequately capitalized.

2. Debt equity ratio declined 0.813 per cent in post- merger period. The decreasing trend of D/E ratio is a favourable sign of performance of SBI, as this is an ideal D/E ratio (1.52% in the last financial year)

3. A slight declining trend has been reflecting in Total advances to total assets ratio in the post- merger period. The ratio reduced by 9.12 percent after the merger. It reflects, the banks' submissive attitude to total advances out of total assets that they are not trying to earn extra money by giving out more advances.

4. Government securities to Total Investment ratio enhanced after the merger. It indicates maximum amount of investment is in low risky investment and Assets which is a good indication for bank depositors.

5. The Capital Adequacy of the SBI increased in terms of CAR, D/E Ratio and Govt. Securities to Total Investment Ratio. A slight decline is shown in Total Advances to Total Asset Ratio.

6. The reduction of NPA was one of the objectives of the merger, a massive reduction was seen in net NPA ratio after the merger. It is considered as a great achievement since NPA has become a double ended sword for banks in the present scenario. Gross NPA ratio also depicts same picture as Net NPA to net advances ratio.

7. The Asset Quality of SBI increased after the merger, which indicates the bank became more stable to face the challenges.

8. The SBI could reduce the Total Expenditure to Total Income ratio after the merger, the ratio showing a declining trend after the merger. It is a positive sign of the bank's efficiency.

9. The Credit Deposit ratio is in a down ward trend after the merger, which specifies the bank's management is less effective at turning available deposits into advances.

10. The Asset turnover Ratio also reduced after the merger, which stipulates bank's ineffective asset management for earning profit.

11. The Management efficiency of the bank enhanced in terms of Business per Employee and Profit per Employee. But the bank failed in the areas of reduction of expenditure and effective management of its assets and deposit.

12. The D/P Ratio shows a sudden fall after the merger because non- payment of dividend after the merger due to the negative earnings incurred by SBI in the year of merger. Later the Bank make it profitable, and the ratio got improved.

13. The ROA and ROE are declined after the merger. In the last financial year, the ratios were improved which means the bank's earnings increased.

14. The Spread to Total Asset Ratio shows very minor changes in post-merger phase compared to pre-merger phase.

15. Interest Income to Total Income Ratio shows an increase after the merger. While Non- Interest Income to Total Income has been declined.

16. The Earning Quality of SBI magnified after the merger. In the initial years after the merger, the bank struggled little, but later it achieved its earning quality.

17. Cash to Deposit Ratio revealed a reduction in the merger period. The ratio enhanced in the last financial year the Bank tries to maintain its liquidity.

18. The Govt. Securities to Total Asset Ratio improved after the merger, which indicates the bank is having adequate liquidity.

19. The Investment to Total Deposit Ratio increased after the merger, which specifies the bank is liquid in meeting its obligation to depositors.

20. Liquid Asset to Total Asset Ratio shows an increment after the merger which stipulates the bank have adequate liquid assets.

21. Liquid Asset to Deposit ratio decreased after the merger. However, the bank enhanced the ratio and maintained the liquidity in the year 2020-21 onwards.

22. The overall liquidity position of the SBI increased after the merger. The merger could enhance the bank’s liquidity and its profitability.

23. The risk element of the bank reduced after the merger. In the initial years after the merger the market risk increased later the bank could reduce it.

24. The financial performance of SBI have a significant effect due to merger. The bank could increase its financial performance in terms of capital adequacy, asset quality, management efficiency, earning quality, liquidity and sensitivity to market Risk to a large extent.

8.9.2 Effect of merger on operational efficiency

1. The efficiency of State Bank of India in reducing its expenses to achieve the desired level of output has increased. Whereas the efficiency to reach at optimum scale of operation is comparatively low in post- merger period.

8.9.3 Effect of Merger on Shareholder’s wealth

- **In short-run**

In case of all event windows there is no significant change in Cumulative Abnormal Return before and after merger in both Constant Mean Return Model and Market Model. Hence, shareholders could not earn any abnormal return of due to merger in short run. The merger of SBI and its associates didn’t provide any significant effect on the shareholder’s wealth during announcement period.

➢ **Long term analysis**

Since there is no significant change in BHAR in 3 months, 6 months, 24 months & 48 months, the merger didn't contribute any significant change in shareholders wealth in long run too.

8.9.4 Effect of Merger on employees

Demographic profile

1. Among 325 samples, 61.5 % are SBI employees and 38.5% are SBT employees.
2. The sample consists of Junior associates (28%), Senior associates (22%), Chief associates (15.1%), Assistant managers (14.8%), Deputy managers (12.3%) and Chief managers (7.1%).
3. Sample contains 56.9% male employees and 43.1% female employees.
4. Majority of the sample come under the age group of 31-40 years (43.4%) followed by 51-60 years (20.9%) and 21-30 years (19.1%) and 41-50 years (16.6%).
5. 52.9% employees are graduates, 27.7% are post graduates and remaining professional degree holders.
6. 40% employees have job experience of 6-10 years followed by 23.4% employees have experience of 11-20 years, 15.4% have 1-5 years' experience and 10.8% and 10.5% have 21-30 and 31-40 years respectively.

Awareness of employees regarding merger

1. Employees are aware on purpose of merger and settlement between banks as a part of merger.
2. Employees' awareness on purpose of merger and on settlement between banks are independent on type of bank.
3. Employees' awareness is independent of their designation.

4. Employees' awareness on purpose of merger is dependent on educational qualification. Professional degree holders and post graduates are highly aware on purpose of merger than graduates. While awareness on settlement between banks as a part of merger is independent on employees' educational qualification.

5. Job experience and awareness on purpose of merger and on settlement between banks are independent.

Apprehensions of employees in pre and post-merger period

1. In a bird's eye view, employees have not much apprehensions towards merger in both pre and post-merger period.

2. Employees have a little anxiety in change in work culture due to merger in pre-merger period and they realised that their work culture is changed after the merger.

3. The job environment of employees changed after the merger.

4. Employees have job uncertainty in pre- merger phase, while after the merger they didn't face job uncertainty due to merger.

5. Employees were optimistic on SBI comes under the league of global banks and they assure that merger leads SBI at the league of global banks in terms of assets.

6. Over all apprehensions of employees towards merger in both phases are not much high.

7. There is statistically significant difference between SBI and SBT employees with regards to their pre-merger and post- merger apprehensions.

8. SBI employees are not having apprehension towards merger compared to SBT employees.

9. Employee's apprehension towards merger is independent on gender.

10. Employee's apprehension in both phases' dependent on designation wise.

11. Junior associates and chief associates are significantly different on their apprehension towards merger in pre and post- merger period at 5% level of significance.

12. Post graduates and professional degree holders have less apprehension compared to graduates.

13. Job experience of employees' and their apprehension towards merger is independent.

14. Younger employees have more apprehension towards merger compared to aged employees.

15. The apprehension of employees in pre and post- merger period are low but when comparing the data of two periods separately the results show that there is a significant change in the apprehension level.

- **Employee's perception regarding change in job structure and benefits availed**

1. Salary and monetary/ non- monetary benefits increased after the merger.
2. Workload and job stress increased after the tie-up.
3. Customer rush and customer complaints increased after the consolidation.
4. Staff reduction in branches after the merger is the major problem faced by employees.
5. Due to the shortage of staffs at branches, the workload increased it leads to job stress and ultimately it affects in providing satisfactory customer services.
6. The workload, customer rush and customer complaints leads to job stress among employees after the merger. Most of the employees have the concerns regarding shortage of staffs in branches after the merger.

Employee's perception regarding the efficiency of bank

1. Amount of deposits and number of loans and advances in branches increased after the merger.
2. Number of customers increased after the merger.
3. Level of NPA increased in branches.
4. Service charges increased.
5. Cross- selling business is highly improved.
6. ATM counters increased.
7. Overall performance of branch improved after the merger.

Employees perception on growth& development opportunities of the bank after merger

1. Merger leads to technological advancements in providing banking services.
2. Introduced innovative products & services after the merger.
3. After the implication of merger, change has been noticed in regulation & controlling.

8.10 Conclusion

The merger of State Bank of India and its associates is the largest consolidation in the history of Indian banking sector. The stakeholders of the bank are eagerly waiting for the result of this mega merger on the performance of the bank and wealth of shareholders. Through this study a detailed analysis has been made to know the changes in the financial performance of SBI before and after the merger period. The impact of merger on its shareholders is also brought under the purview of the study. The strong opposition and strikes from the side of employees were also witnessed during announcement period of merger. A survey has been conducted among the employees of merged SBI to know the apprehension of them during and after the merger. The result of the analysis of the data collected from the employees show that they didn't have much apprehension about the after effect of merger during and after the merger. At the same time, when taking the data collected from employees coming former SBT alone, they had a lot of apprehension regarding the change in status, power, organisational culture etc. as part of merger. Moreover, most of the employees opined that the workload of them has increased to a significant level and still they are facing staff shortage at branch level. But regarding the positive implication of merger, they don't have any difference of opinion.

The analysis of financial data of SBI before and after the merger shows that the bank is able to maintain proper capital adequacy ratio after merger as per norms. The Asset quality of the bank has improved, specifically the level of non-performing asset (NPA) has decreased to a significant extent. This was one of the major objectives of merger. The productivity of the employees has increased to a significant manner after the merger. In contrary, the efficiency of management in reducing the expenses in proportion to their income was not up to the satisfactory level. But it is found that the earning quality of the bank has reduced after the merger, specifically in case of Dividend payout ratio, Return on Asset and Return on Equity. The result of the analysis of data related with shareholders return using Event Study (CAR and BHAR) also shows the same result i.e., the merger couldn't contribute anything to the earning capacity of the bank or shareholders return. When analysing the data related with liquidity position of the bank after merger, it is seen that the bank has enough investment to meet the liquidity position but the cash in hand and liquid assets to meet their liquidity crisis are not satisfactory as well as not in proportion to their deposits. The sensitivity of the shares to move in accordance with the stock market is comparatively less during the post- merger period. The price earnings ratio has also been improved during post- merger period. The result of DEA Analysis shows the efficiency of the bank to reach at optimum scale of operation is low in post- merger period. The merger has been done with the major aim of making the public sector giant in Indian banking sector SBI as one of top 50 global banks in terms of its asset and performance. Now as per Forbes ranking, the position of SBI among global bank is 56 in terms of total assets. As it is a long vision endeavour, the stakeholders may expect a paradigm shift in the position of SBI among global banks in the long run.

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CHAPTER 9

RECOMMENDATIONS AND SCOPE FOR FURTHER STUDIES

9.1 Introduction

This is the final chapter of the thesis. This chapter provides the recommendations revealed through findings to the policy makers and the bank. And also gives scope further studies in the research area the interested researchers can research those areas.

9.2 Suggestions

- **To the Bank**

- Should consider the human side while internal or external restructuring, because employees are the driving force in any organisation.
- In order to have a smooth running of banks, approve adequate number of staff in which branches have shortage of staff as they face acute shortage of staff in branches after the merger.
- Employees in SBT are still not much satisfied with merger, and they couldn't completely adjust with the work culture of SBI, measures should be taken to reduce the problems of staff coming from different work culture.
- There should not be any partiality between target bank and bidder bank employees.
- Bank should take necessary steps to reduce the service charges hiked after merger to maintain better customer relationship.

9.3 Scope for further Studies

Even though this study covers major questions related to merger of SBI and its associates, certain areas are not covered. The interested researchers can research the following areas to fill the gap in research;

- The effect of the merger of SBI and its associates on customers.
- A comparative study on the efficiency of bank mergers.
- A comparative study on the problems faced by human resource related with different bank mergers.
- Long term impact of merger of SBI on efficiency of the bank.

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APPENDIX

Questionnaire Cover Letter

Dear Sir/Madam,

My name is Fousiya M P, and I am currently doing Ph.D. in commerce at PSMO College, Tirurangadi, (a research center affiliated with the University of Calicut) under the supervision of Dr. Sreesha CH, Asst. Professor, PSMO College Tirurangadi, on **"Effect of Merger of State Bank of India and its Associates in 2017- A Pre-Post Analysis"**.

The study aims to analyse the effect of the merger on the profitability, operational efficiency, shareholders' wealth and the level of Non- performing Asset of bidder bank. It also focuses on the perception of employees towards the implication of merger. This questionnaire has been developed to study the pre and post-merger attitude and perception of employees in bidder (State Bank of India) and target (State Bank of Travancore) bank.

Your support in spending your time and completing the attached questionnaire would be highly appreciated. Please be sure that the information given would be treated as strictly confidential and will be used only for academic purpose.

Kindly complete the questionnaire and return it at your earliest.

Yours sincerely,

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Note: - This questionnaire is for those employees who have experienced the Merger.

QUESTIONNAIRE

Effect of Merger of State Bank of India and its Associates in 2017- A Pre-Post Analysis

First of all, thank you so much for participating in our country. Please be sure that the information collected from you would be kept confidential. The survey includes the following two sections.

Section I

1. The previous employer before the merger:
   a) State Bank of India ☐
   b) State Bank of Travancore ☐
2. Rate your level of awareness regarding the purpose of merger& acquisition in the bank.
   Fully aware ☐
   Slightly aware ☐
   Not aware ☐
3. Rate your level of awareness regarding the settlement between banks as a part of merger.
   Fully aware ☐
   Slightly aware ☐
   Not aware ☐
4. Did you favour merger at the time of its announcement?
   Strongly oppose ☐
   Somewhat oppose ☐
   Neutral ☐
   Somewhat favour ☐
   Strongly favour ☐
5. Do you feel it is beneficial to the bank after the merger?
   To a very great extent ☐
   To a great extent ☐
   To a moderate extent ☐
   To some extent ☐
   Not at all ☐

6. Could you adjust with the changes occurred in your job environment due to the merger?

   To a very great extent ☐

   To a great extent ☐

   To a moderate extent ☐

   To some extent ☐

   Not at all ☐

7. Kindly read the following statements and tick any one of the five options given below about your apprehension regarding merger in pre- merger period.

SD – Strongly Disagree, D – Disagree, N – Neutral (Neither agree nor disagree), Agree, SA – Strongly Agree

Sl. No.	Statements	SD	D	N	A	SA
7.1	Top management had properly communicated with me about the merger plan.					
7.2	Level of uncertainty increased when I heard the announcement of the merger.					
7.3	I had the fear of job loss.					
7.4	I felt stressed& confused.					
7.5	I had worried about the loss of identity.					
7.6	I was afraid of transfer.					
7.7	Felt insecurity regards to the job.					
7.8	Worried about changes in power, status, prestige.					
7.9	Anxious about changes in the work culture.					
7.10	Scared of changes in work environment.					
7.11	Afraid of technological changes.					
7.12	Upset on the increment of workload.					
7.13	Felt fear about the change of the branch.					
7.14	Fear of being non-competent due to the merger.					
7.15	I felt fear of demotion from the present position.					

Sl. No.	Statements	SD	D	N	A	SA
7.16	Felt fear of change in salary & other monetary benefits.					
7.17	I felt sufficiently informed about the process of the merger.					
7.18	Believe that merger is the right way to reach SBI at the league of global banks.					

8. Kindly read the following statements and tick any one of the five options given below about your attitude on post- merger.

SD – Strongly Disagree, D – Disagree, N – Neutral (Neither agree nor disagree), Agree, SA – Strongly Agree

Sl. No.	Statements	SD	D	N	A	SA
8.1	The merger was carried as per communicated by the top management.					
8.2	No kind of uncertainty faced after the merger.					
8.3	No kind of job loss because of the merger.					
8.4	The merger did not create confusion, stress etc., as I expected.					
8.5	The merger did not affect personal identity in the workplace.					
8.6	No kind of transfer as I feared.					
8.7	No kind of job insecurity after merger.					
8.8	No change in power, status& prestige.					
8.9	The merger didn’t contribute change in work culture.					
8.10	No kind of change was experienced in the working environment					
8.11	No kind of change in the technological side as I feared.					

Sl. No.	Statements	SD	D	N	A	SA
8.12	The workload is the same as before the merger.					
8.13	Didn't face any problems as a result of the change of branch.					
8.14	I could work with the same competency after the merger.					
8.15	I got promotion as I expected after the merger.					
8.16	Increased salary & other monetary benefits.					
8.17	All the process of merger was as per the information given before the merger.					
8.18	Merger leads SBI at the league of global banks in terms of assets.					

9. Please tick in relevant columns to know your opinion regarding post-merger.

Sl. No.	Variables	Decreased to a great	Decreased to some extent.	No change	Increased to some extent.	Increased to a great
9.1	Salary					
9.2	Non-monetary/ monetary benefits if any other than salary.					
9.3	Workload					
9.4	Job stress					
9.5	Customer rush in branches					
9.6	Customer complaint					
9.7	Number of staffs in branches.					

10. Kindly read the following items and please tick any one of the options on your perception on post- merger.

Sl. No.	Variables	Decreased to a great extent.	Decreased to some extent.	No change	Increased to some extent.	Increased to a great extent.
10.1	Amount of deposits.					
10.2	Number of loans& advances.					
10.3	The number of customers per branch.					
10.4	level of Non-performing Assets in the bank.					
10.5	service charges of various transactions.					
10.6	cross- selling business of the bank.					
10.7	Number of branches after the merger.					
10.8	Number of ATM counters after the merger.					
10.9	Overall performance of the bank.					

11. Kindly read the following statements and tick any of the five options given below.

SD – Strongly Disagree, D – Disagree, N – Neutral (Neither agree nor disagree), A-Agree, SA – Strongly Agree

Sl. No.	Statements	SD	D	N	A	SA
11.1	Merger leads to technological advancements in providing banking services.					
11.2	Introduced innovative products& services after merger.					

Sl. No.	Statements	SD	D	N	A	SA
11.3	After the implication of merger, change has been noticed in regulation& controlling.					
11.4	Accounting practices were changed after the merger.					

12. General comments about the post-merger performance of SBI.

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Section II

1. Designation
2. Experience (in years):
3. Gender: Male ☐ Female ☐
4. Age:
5. Education Qualification:

Graduation ☐

Post-Graduation ☐

Professional Degree ☐

Others (Please specify) ☐

End of the Questionnaire. Thank you for your valuable cooperation.

Note: You can fill this survey online using this link:

https://forms.gle/yRsqqoVyTAL5QNURA