The 2017 State Bank of India Merger: Impact on Market Concentration and a Comparative Analysis of Corporate Governance & Performance with Other Public Sector Banks

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By

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DECLARATION

I, ARATHI SIVARAM do hereby declare that this thesis entitled "**The 2017 State Bank of India Merger: Impact on Market Concentration and a Comparative Analysis of Corporate Governance & Performance with Other Public Sector Banks**" is a bonafide record of research work done by me under the guidance of Prof. (Dr.) SATHEESH EK, Registrar, University of Calicut. I further declare that this thesis has not previously formed the basis for the award of any degree, diploma, associateship, fellowship, or other similar title of recognition.

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The thesis is revised as per the modifications and recommendations reported by the adjudicators. Soft copy attached is the same as that of the revised copy.

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ARATHI SIVARAM

The 2017 State Bank of India Merger: Impact on Market Concentration and a Comparative Analysis of Corporate Governance & Performance with Other Public Sector Banks

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Abstract

This study compares mergers and acquisitions in the Indian banking sector, with a focus on the State Bank of India (SBI) compared to other public sector banks. The goal is to understand how SBI's merger has affected competition and concentration in the banking industry. The study aims to determine how mergers impact SBI's corporate governance compliance, disclosure practices, and overall corporate performance and compare these to other public sector banks.

The study finds that there is a growing concern in the public banking sector due to the increasing concentration of power and decreasing competition, which can lead to a limited number of leading firms dominating the market. This trend may accelerate if more mergers and acquisitions occur in the sector.

After analyzing the data, the study reveals that SBI has improved overall corporate governance compliance and disclosure scores after the merger. However, there are areas such as board effectiveness, audit function, and disclosure transparency that require more attention and improvement. The study suggests that proactive enhancement in corporate governance can lead to higher governance standards, improved accountability, and increased stakeholder trust, which are essential for the long-term sustainability of the bank.

Furthermore, the study highlights that SBI is performing well in many corporate performance metrics, but there are some challenges in addressing complaints and providing loans to priority sectors. To overcome these challenges, the study recommends implementing measures such as training employees to effectively resolve complaints and creating loan products that are tailored to the needs of priority sectors.

Overall, this research provides valuable insights into the complex relationships between mergers and acquisitions, corporate governance, and corporate performance in India's public banking sector. How mergers and acquisitions lead to market concentration and reduction in the competitive environment. It contributes significantly to existing knowledge and has important implications for policy-makers, regulators, and bank executives.

The 2017 State Bank of India Merger: Impact on Market Concentration and a Comparative Analysis of Corporate Governance & Performance with Other Public Sector Banks

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<u>**സംഗ്രഹം**</u>

ഈ പഠനം മറ്റ് പൊതുമേഖലാ ബാങ്കുകളെ അപേക്ഷിച്ച് സ്റ്റേറ്റ് ബാങ്ക് ഓഫ് ഇന്ത്യയെ (എസ്ബിഐ) കേന്ദ്രീകരിച്ച് ഇന്ത്യൻ ബാങ്കിംഗ് മേഖലയിലെ ലയനങ്ങളും ഏറ്റെടുക്കലുകളും താരതമ്യം ചെയ്യുന്നു. എസ്ബിഐയുടെ ലയനം വിപണി മത്സരത്തെയും ബാങ്കിംഗ് വ്യവസായത്തിലെ വിപണി കേന്ദ്രീകരണത്തെയും എങ്ങനെ ബാധിച്ചുവെന്ന് മനസ്സിലാക്കുകയാണ് ലക്ഷ്യം. ലയനങ്ങൾ എസ്ബിഐയുടെ കോർപ്പറേറ്റ് ഗവേണൻസ് കംപ്ലയൻസ്, വെളിപ്പെടുത്തൽ രീതികൾ, മൊത്തത്തിലുള്ള കോർപ്പറേറ്റ് പ്രകടനം എന്നിവയെ എങ്ങനെ സ്വാധീനിക്കുന്നുവെന്ന് നിർണ്ണയിക്കാനും മറ്റ് പൊതുമേഖലാ ബാങ്കുകളുമായി താരതമ്യം ചെയ്യാനും ഈ പഠനം ലക്ഷ്യമിടുന്നു.

വർദ്ധിച്ചുവരുന്ന അധികാര കേന്ദ്രീകരണവും മത്സരം കുറയുന്നതും കാരണം പൊതു ബാങ്കിംഗ് മേഖലയിൽ വർദ്ധിച്ചുവരുന്ന ആശങ്കയുണ്ടെന്ന് പഠനം കണ്ടെത്തുന്നു, ഇത് പരിമിതമായ എണ്ണം മുൻനിര സ്ഥാപനങ്ങൾക്ക് വിപണിയിൽ ആധിപത്യം സ്ഥാപിക്കാൻ ഇടയാക്കും. ഈ മേഖലയിൽ കൂടുതൽ ലയനങ്ങളും ഏറ്റെടുക്കലുകളും ഉണ്ടായാൽ ഈ പ്രവണത വർദ്ധിച്ചേക്കാം.

ഡാറ്റ വിശകലനം ചെയ്ത ശേഷം, ലയനത്തിന് ശേഷം എസ്ബിഐ മൊത്തത്തിലുള്ള കോർപ്പറേറ്റ് ഗവേണൻസ് കംപ്ലയൻസും ഡിസ്ക്ലോഷർ സ്കോറുകളും മെച്ചപ്പെടുത്തിയതായി പഠനം വെളിപ്പെടുത്തുന്നു. എന്നിരുന്നാലും, കൂടുതൽ ശ്രദ്ധയും മെച്ചപ്പെടുത്തലും ആവശ്യമുള്ള ബോർഡ് ഫലപ്രാപ്തി, ഓഡിറ്റ് പ്രവർത്തനം, വെളിപ്പെടുത്തൽ സുതാര്യത തുടങ്ങിയ മേഖലകളുണ്ട്. ബാങ്കിന്റെ ദീർഘകാല സുസ്ഥിരതയ്ക്ക് അത്യന്താപേക്ഷിതമായ, കോർപ്പറേറ്റ് ഗവേണൻസിലെ ക്രിയാത്മകമായ മെച്ചപ്പെടുത്തൽ ഉയർന്ന ഭരണ നിലവാരത്തിലേക്കും, മെച്ചപ്പെട്ട ഉത്തരവാദിത്തത്തിലേക്കും, പങ്കാളികളുടെ വിശ്വാസ്യതയിലേക്കും നയിക്കുമെന്ന് പഠനം സൂചിപ്പിക്കുന്നു.

കൂടാതെ, പല കോർപ്പറേറ്റ് പെർഫോമൻസ് മെട്രിക്കുകളിലും എസ്ബിഐ മികച്ച പ്രകടനം കാഴ്ചവെക്കുന്നുണ്ടെന്നും എന്നാൽ പരാതികൾ പരിഹരിക്കുന്നതിലും മുൻഗണനാ

മേഖലകൾക്ക് വായ്പ നൽകുന്നതിലും ചില വെല്ലുവിളികൾ ഉണ്ടെന്നും പഠനം എടുത്തുകാണിക്കുന്നു. ഈ വെല്ലുവിളികളെ മറികടക്കാൻ, പരാതികൾ ഫലപ്രദമായി പരിഹരിക്കാൻ ജീവനക്കാരെ പരിശീലിപ്പിക്കുക, മുൻഗണനാ മേഖലകളുടെ ആവശ്യങ്ങൾക്കനുസൃതമായി വായ്പാ ഉൽപന്നങ്ങൾ സൃഷ്ടിക്കുക തുടങ്ങിയ നടപടികൾ നടപ്പിലാക്കാൻ പഠനം ശുപാർശ ചെയ്യുന്നു.

മൊത്തത്തിൽ, ഈ ഗവേഷണം ലയനങ്ങളും ഏറ്റെടുക്കലുകളും തമ്മിലുള്ള സങ്കീർണ്ണമായ ബന്ധങ്ങൾ, കോർപ്പറേറ്റ് ഭരണം, ഇന്ത്യയുടെ പൊതു ബാങ്കിംഗ് മേഖലയിലെ കോർപ്പറേറ്റ് പ്രകടനം എന്നിവയെക്കുറിച്ചുള്ള മൂല്യവത്തായ ഉൾക്കാഴ്ചകൾ നൽകുന്നു. ലയനങ്ങളും ഏറ്റെടുക്കലുകളും വിപണി ഏകാഗ്രതയിലേക്കും മത്സരാധിഷ്ഠിത പരിതസ്ഥിതിയിൽ കുറവിലേക്കും നയിക്കുന്നതെങ്ങനെ. ഇത് നിലവിലുള്ള അറിവിന് കാര്യമായ സംഭാവന നൽകുകയും നയരൂപകർത്താക്കൾ, റെഗുലേറ്റർമാർ, ബാങ്ക് എക്സിക്യൂട്ടീവുകൾ എന്നിവർക്ക് സുപ്രധാനമായ പ്രത്യാഘാതങ്ങൾ ഉണ്ടാക്കുകയും ചെയ്യുന്നു.

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LIST OF ABBREVIATIONS

M&A	-	Mergers and Acquisitions
SBI	-	State Bank of India
RBI	-	Reserve Bank of India
CSR	-	Corporate Social Responsibility
CR	-	Concentration Ratio
HHI	-	Herfindahl's Hirschman's Index
CG	-	Corporate Governance
CGI	-	Corporate Governance Index
KPI	-	Key Performance Indicator
ROA	-	Return on Assets
ROE	-	Return on Equity
NIM	-	Net Interest Margin
NPA	-	Non-Performing Assets
CASA	-	Current Account Savings Account
CAR	-	Capital Adequacy Ratio
PSA	-	Priority Sector Advances
BOB	-	Bank of Baroda
BOI	-	Bank of India
BOM	-	Bank of Maharashtra
IOC	-	Indian Overseas Bank
PNB	-	Punjab National Bank

CHAPTER 1
INTRODUCTION

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"Coming together is a beginning, staying together is progress, and working together is success."

– Henry Ford

1.1 INTRODUCTION

Mergers and acquisitions have been a part of human history since ancient times, as individuals and businesses sought to consolidate resources, expand territories, and gain a competitive edge. These transactions were typically motivated by economic, political, or strategic goals, such as accessing valuable resources, capturing new markets, or strengthening defenses against rivals. The roots of Mergers and Acquisitions (M&A) can be traced back to ancient times, where historical evidence shows businesses merging or acquiring others to gain market dominance or access new resources. However, it was during the 18th and 19th centuries, specifically during the industrial revolution, that M&A became a more significant force in shaping the business landscape.

The emergence of large-scale industrialization and capitalism in the late 1800s and early 1900s paved the way for the modern concept of mergers and acquisitions (M&A). Companies during this period aimed to achieve growth, diversification, and market dominance through mergers and acquisitions. This period saw the creation of industrial giants in sectors like oil, steel, and railroads through aggressive consolidation. The growth of industrialization and capitalism created a favorable environment for M&A activity, as large-scale corporations with extensive operations, significant capital, and the desire for expansion sought to leverage economies of scale, improve efficiency, and gain market power. M&A became a strategic means to achieve these objectives.

In the mid-20th century, there was a noticeable shift towards M&A activity with a strong emphasis on achieving economies of scale, market expansion, and synergies. The rise of globalization, technological advancements, and evolving business environments created new prospects and obstacles, prompting companies to pursue strategic transactions. Deregulation, privatization, and the emergence of new industries were some of the crucial factors that impacted M&A activity during this time.

Additionally, the post-World War II era saw a surge in M&A activity due to globalization, advances in transportation and communication, and evolving market dynamics. Companies sought to expand into new markets and access resources on a global scale, leading to an increase in cross-border mergers and acquisitions. This era also saw the rise of conglomerate mergers, where companies diversified their operations by acquiring firms in unrelated industries.

Over time, the field of M&A has undergone significant development. Theories and frameworks have been created to better comprehend and examine the motives, strategies, and results of M&A transactions. Additionally, regulatory bodies and legal frameworks have been put in place to oversee M&A activities and safeguard the interests of stakeholders. The establishment of legal frameworks and regulatory bodies has been instrumental in shaping the M&A landscape. Governments have acknowledged the importance of regulating mergers and acquisitions to prevent monopolistic practices and safeguard the interests of shareholders and consumers. To ensure fair competition and promote market efficiency, antitrust laws and competition commissions have been established.

Technological advancements have also had a profound impact on the origin and establishment of M&A. The advent of the internet, digitalization, and the rapid development of communication technologies have facilitated the exchange of information and made it easier for companies to explore potential merger and acquisition opportunities across geographies. The establishment of financial markets and the availability of capital through debt and equity financing have further fueled

M&A activity. Companies can access funding to finance acquisitions, allowing them to execute strategic growth plans and leverage synergies.

The benefits of mergers and acquisitions have evolved over time. Initially, M&A focused on achieving economies of scale, market consolidation, and gaining competitive advantage. However, modern-day M&A also considers factors such as strategic fit, access to new technologies and markets, diversification, and risk management.

In the present day, mergers and acquisitions remain a key factor in shaping industries, economies, and corporate landscapes. Mergers and acquisitions are these days common choices for business survival and development (K. Subhashree., 2018). Companies partake in M&A for multiple reasons, such as market expansion, realizing synergies, cost efficiency, talent acquisition, technological advancements, and competitive positioning.

The origin and establishment of mergers and acquisitions can be attributed to the interplay of various economic, social, and technological factors. From the early days of industrialization to the present era of globalization and digitalization, M&A has become an integral part of the business landscape. The evolution of legal frameworks, advancements in technology, and the availability of capital have all contributed to the growth and development of M&A as a strategic business tool. Understanding the historical context and the factors that have shaped the establishment of mergers and acquisitions is essential for analyzing their current trends and future prospects in the dynamic global business environment.

Merger and acquisition (M&A) in banking sector

The banking sector is a vital component of any economy, serving as a backbone for financial intermediation and economic growth. In today's ever-changing and highly competitive environment, banks are continually exploring ways to improve their market position, augment their abilities, and meet evolving customer demands. Merger and acquisition (M&A) activities have emerged as crucial strategic initiatives in the banking sector, empowering banks to attain their goals and foster expansion.

Currently, there is a lot of focus on mergers and acquisitions taking place within the financial services industry (Gill, 2000).These M&A transactions involve consolidating banks or acquiring banks with the goal of achieving various strategic objectives. The banking sector, known for intense competition, evolving customer demands, and regulatory reforms, has experienced a surge in M&A activities over the years.

The banking sector has witnessed a wave of M&A activities, both domestically and globally. Globally mergers and acquisitions have become a major way of corporate restructuring and the financial services industry has also experienced merger waves leading to the emergence of very large banks and financial institutions (Gandhi, 2018).Factors such as increased competition, evolving customer preferences, regulatory reforms, and technological advancements have accelerated the pace of consolidation in the industry. Mergers and acquisitions allow banks to consolidate their market share, strengthen their balance sheets, and navigate regulatory challenges more effectively.

The process of merging involves the consolidation of two or more banks into a single entity. An acquisition, on the other hand, is when one bank takes over another. These transactions are motivated by different factors, such as market consolidation, geographical expansion, diversification of product portfolios, cost synergies, and access to new technologies and expertise. By combining resources, banks can benefit from economies of scale, increase operational efficiency, and strengthen their competitive advantage in the market. By integrating systems, eliminating duplication, and optimizing resource allocation, banks can streamline operations, reduce costs, and improve overall efficiency. Synergies, cost savings, and efficiency gains contribute to value creation in M&A transactions (Gregor Andrade, 2001). Successful M&A transactions positively affect financial performance indicators such as profitability, market value, and efficiency and it can lead to enhanced firm performance. Moreover, M&A activities provide access to new technologies, capabilities, and expertise, enabling banks to stay competitive in a rapidly evolving digital landscape.

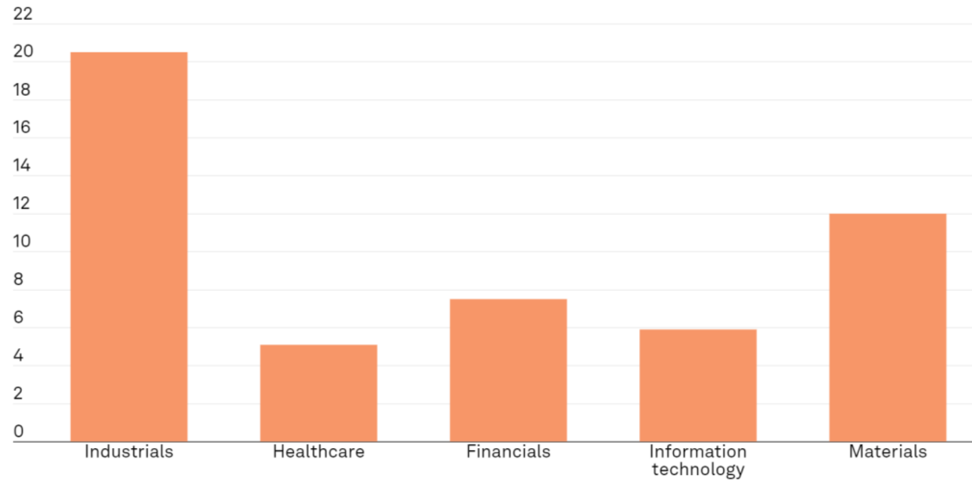
Furthermore, M&A transactions in the banking sector have broader implications for the economy. They can enhance financial stability by strengthening the capital base, risk management capabilities, and corporate governance of banks. It also contributes to the overall health and resilience of the financial system, particularly during periods of economic uncertainty. Banks need to keep pace with the growing industrial and agricultural sectors to serve them effectively (Jatkar, 2012).

Mergers and acquisitions have become an integral part of the strategic landscape in the banking sector. These transactions enable banks to strengthen their market position, enhance operational efficiencies, and capitalize on growth opportunities. However, successful implementation requires meticulous planning, effective execution, and close adherence to regulatory guidelines. By carefully navigating the M&A landscape, banks can drive their growth, adapt to changing market dynamics, and contribute to the development and stability of the banking sector. A study (Devos, 2009) concludes that merger synergies in completed transactions arise as a result of more efficient deployment of economic resources.

However, mergers and acquisitions in the banking sector come with their own set of challenges. Successful integration requires careful consideration of cultural differences, harmonizing systems and processes, effective human resource management, and maintaining customer loyalty. Regulatory frameworks and compliance requirements also play a crucial role in shaping M&A transactions, ensuring alignment with regulatory objectives, safeguarding customer interests, and preserving the banking system's stability. Therefore, managing stakeholder expectations and adhering to compliance standards are essential for transparency and protecting the financial system.

Figure 1.1

Sectors Wise Most M&A Activity inQ4 2022.

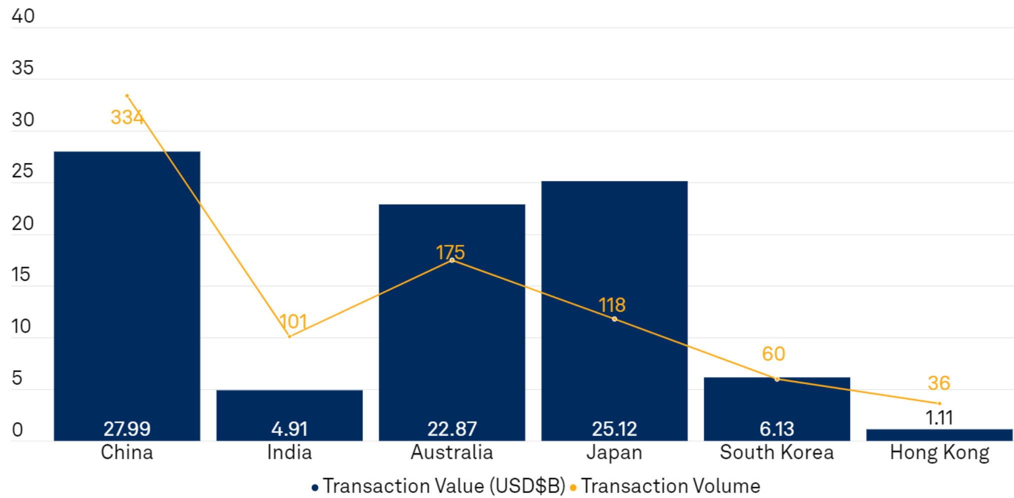


Source: S&P global market intelligence (S&P global, 2022). Data as of 5 January 2023. (Includes announced or completed deals between oct.1,2022, and Dec.31,2022, Where the buyer purchased a majority stake in a company or an asset)

Figure 1.1 shows the S&P global market intelligence report of sectors with the most M&A activity. Among them, the financial sector ranked third according to the S&P global market intelligence report for the fourth quarter of 2022. It indicates that the financial sector has a strong interest in adopting M&As to gain synergies in the global market. The increasing demand for specialized financial services and the desire to diversify product offerings have motivated financial institutions to pursue M&A as a means of expanding their capabilities and customer base. The rising trend of mergers and acquisitions in the financial sector demonstrates the industry's drive for growth, innovation, and adaptability in an ever-changing business environment.

Figure 1.2

Countries/Regions with Most M&A Activity in Q4 2022.

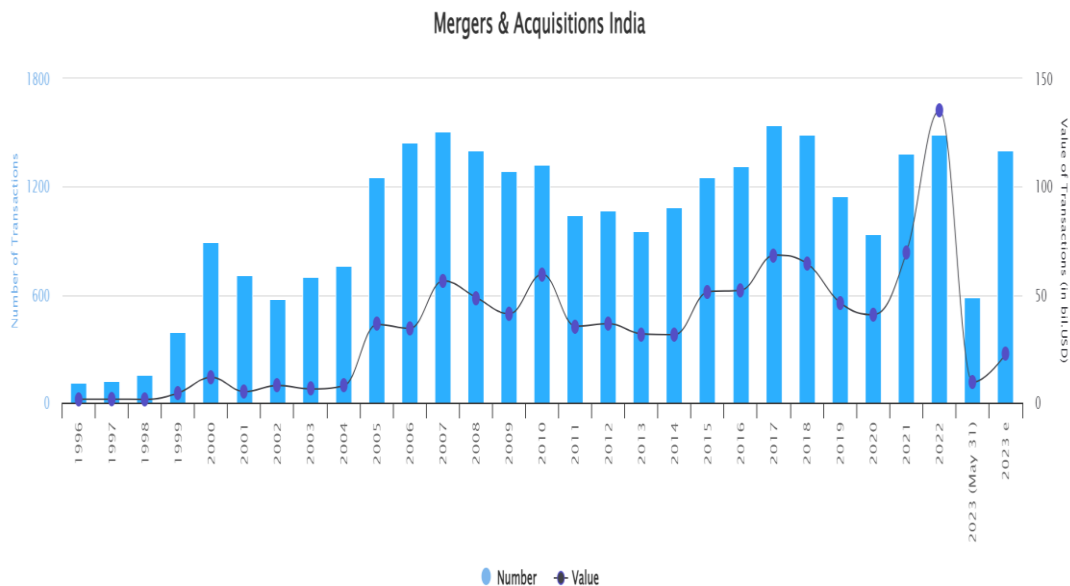


Source: S&P global market intelligence (S&P global, 2022). Data as of 5 January 2023. (Includes announced or completed deals between oct.1,2022, and Dec.31,2022, Where the buyer purchased a majority stake in a company or an asset)

The Figure 1.2 shows the countries with most M&A activity in the fourth quarter of the year 2022. In this report India gained fourth position based on the total transaction volume of M&A transactions.

Figure 1.3

Mergers &Acquisitions in India



Source: (IMAA analytics, 2023), imaa-institute.org

The above figure 1.3 shows the M&A transactions in India from1996 to 2023. It has been observed that there is a steady increase in M&A deals every year, with the highest number of transactions taking place in 2017. The year 2017 was particularly significant for the banking sector in India, as the State Bank of India merged with its associate banks and Bharatiya Mahila Bank, leading to a mega-merger. The SBI mega merger was one of the important milestones in Indian banking sector.

1.2 Statement of the problem

Over the past few years, the Indian banking sector has experienced a rapid increase in mergers and acquisitions (M&A). The increasing trend of M&A reflects the industry's pursuit of growth, innovation, and adaptability in an ever-evolving business landscape.

On April 1, 2017, SBI merged with five of its associate banks, namely State Bank of Bikaner & Jaipur, State Bank of Hyderabad, State Bank of Mysore, State Bank of Patiala, and State Bank of Travancore, along with Bhartiya Mahila Bank. The mega-merger of the State Bank of India (SBI) with its associate banks in India was a

significant event in the banking sector and biggest consolidation in the history of Indian banking. This mega-merger created a behemoth in the banking sector and SBI has become 45th largest bank in the world with an asset base of $ 447 billion. There's no denying that the mega-merger has strengthened SBI's position as the largest bank in India and the 45th largest bank worldwide, based on its asset base. This move has certainly improved the bank's ability to compete in both the domestic and global markets.

However, each merger tends to restructure the market and influence market concentration and competition levels. This study seeks to assess the impact of the SBI mega-merger on market concentration and competition levels of public banking sector in India. Additionally, the study aims to assess, compare, and evaluate SBI's corporate governance compliance practices and corporate performance against other selected public sector banks in India.

1.3 Research questions

- To what extent SBI’s merger 2017 have altered the market concentration and competition level of Indian public banking sector?
- Whether SBI showcased any improvement in the corporate governance compliance practices after the merger?
- Is SBI the leading public sector bank in terms of corporate governance compliance after the merger?
- Is there any improvement in SBI's corporate performance compared to other public sector banks after the merger?

1.4 Significance of the study

In recent years, India has witnessed a significant rise in the number of bank mergers. Factors like the changing competitive environment, customers' expectations, the need for expansion, and technological advancements are some of the driving forces behind each merger. One of the important factors contributing to the increasing bank mergers in India is the regulatory pressure towards consolidation. The Reserve Bank of India

(RBI), the central bank of the country, has been actively promoting the consolidation of banks to create stronger and more resilient institutions. Traditionally the Reserve Bank of India (RBI) has directed bank mergers (Desai, 2016). The goal has been to merge weaker banks with stronger ones to maintain economic balance. This move aims to improve the overall health of the banking system, address non-performing assets, and enhance governance and risk. To gain competitive advantage, consolidation of operation in the form of M&A is one of the effective strategies widely adopted by the banks (Singh, 2018).

State bank of India's (SBI) merger with its associate banks holds significance due to several factors. SBI 's mega-merger represents a major transformation in the banking sector, as it resulted in the creation of largest banking entity in the country. So, analyzing and understanding the outcomes and implications of this merger is very crucial for assessing the effectiveness of such consolidation strategies. Mega-merger had a systemic impact on the banking industry. It is important to analyze whether this merger has affected market concentration, competition, corporate governance, and the overall corporate performance of the merged bank.

This study aims to investigate the impact of SBI's mega-merger on the market concentration and competition structure of India's public banking sector. This study also aims to analyze and understand corporate governance and the overall corporate performance of SBI during the pre-merger and post-merger periods. Furthermore, the study will compare SBI's CG compliance and corporate performance with those of other public sector banks. This is significant as corporate governance plays a crucial role in ensuring transparency, accountability, and ethical conduct within organizations. Assessing the pre-post merger and comparison of corporate governance compliance practices and performance metrics provides valuable insights for improving governance frameworks and enhancing overall performance.

1.5 Scope of the study

This study aims to examine the effects of SBI's mega-merger on corporate governance and overall corporate performance of the State Bank of India and compares it with other selected public sector banks corporate governance and corporate performance.

This study also focuses on analyzing whether the SBI'S mega-merger has altered the degree of banking market concentration and how it affects market competition.

To assess market concentration and competition, the researcher considered all public sector banks in the industry from the period 2014-2022.

To assess corporate governance compliance practices and overall corporate performance, the researcher has considered 12 public sector banks in India that are still prevailing in the industry in the year 2022; they are State Bank of India, Bank of Baroda, Bank of India, Bank of Maharashtra, Canara bank, Central bank of India, Indian bank, Indian overseas bank, Punjab and Sind bank, Punjab national bank, UCO bank and Union bank, and analyzed for a period of 8 years from 2014 to 2022. Excluded the merger year 2018.

The event of SBI's mega-merger was kept as the middle point to split the dataset. In the study period, the first four years (2014-2017) were considered as a pre-merger period, and the next four years (2019-2022) were considered as a post-merger period.

1.6 Objectives

1. To identify the impact of SBI's mega merger on competition and concentration in the banking industry.
2. To measure the corporate governance compliance practices of State Bank of India during pre- merger and post-merger periods.
3. To compare corporate governance compliance practices of State bank of India with other public sector banks.
4. To analyze the overall corporate performance of the State Bank of India during the pre-merger and post-merger periods.
5. To compare the overall corporate performance of State bank of India with other public sector banks.

1.7 Hypotheses

1. *H0: Corporate governance compliance scores of SBI has no significant difference during pre-merger and post-merger periods.*

2. *H0: There is no significant difference in the corporate governance compliance practices of SBI in pre-merger and post-merger periods compared with other public sector banks.*

3. *H0: There is no significance difference in the Corporate Governance Dimensions Wise Compliance score of SBI with other Public Sector Banks in pre-merger and post-merger periods.*

   - *H0: There is no significant difference in the Board Effectiveness dimension of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other public sector banks.*

   - *H0: There is no significant difference in the Audit function dimension of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.*

   - *H0: There is no significant difference in the Remuneration Committee dimension of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.*

   - *H0: There is no significant difference in the Shareholder's Rights & Information dimension of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.*

   - *H0: There is no significant difference in the Shareholder's Rights & Information dimension of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.*

- *H0: There is no significant difference in the Disclosure & Transparency dimension of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.*

4. *H0: There is no significant difference in the overall corporate performance of SBI during pre- post merger periods.*

    - *H0: There is no significant difference in the financial perspective of SBI during pre- post merger periods.*
    - *H0: There is no significant difference in the customer perspective of SBI during pre- post merger periods.*
    - *H0: There is no significant difference in the internal business process perspective of SBI during pre- post merger periods.*
    - *H0: There is no significant difference in the learning &growth perspective of SBI during pre- post merger periods.*
    - *H0: There is no significant difference in the social perspective of SBI during pre- post merger periods.*

5. *H0: There is no significant difference in the overall corporate performance of SBI with other selected public sector banks during pre- post merger periods.*

    - *H0: There is no significant difference in the Financial Perspective of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.*
    - *H0: There is no significant difference in the Customer Perspective of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.*
    - *H0: There is no significant difference in the Internal Business Process Perspective of SBI during the pre-merger (2014-2017) and post-*

merger phase (2019-2022), when compared with other selected public sector banks.

- *H0: There is no significant difference in the Learning & Growth Perspective of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.*

- *H0: There is no significant difference in the Social & Environment Perspective of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.*

1.8 Research methodology

Research methodology refers to the systematic process by which researchers define, plan, and execute their studies to answer specific questions or solve problems. It explains the way how research should be undertaken. It involves the selection and use of appropriate techniques and procedures for gathering and analyzing data. It is a system of believes and philosophical assumptions which shape the understanding of the research questions and underpin the choice of research methods (Melnikovas, 2018).

Research design

The research design is the conceptual structure within which research is conducted; it constitutes the blueprint for the collection, measurement and analysis of data. Research design is a structured framework that outlines how a research project will be conducted to effectively answer the research question (Kothari, 2004). It outlines the overall strategy and steps that guide the researcher in collecting, analyzing, and interpreting data, specifying the sources and types of information relevant to the research question, the methods of data collection, and the analytical strategy to be used to interpret it. In this study the researcher has used the 'Research onion' method of research design developed by (Saunders M. , 2017).The '*research onion' guides the*

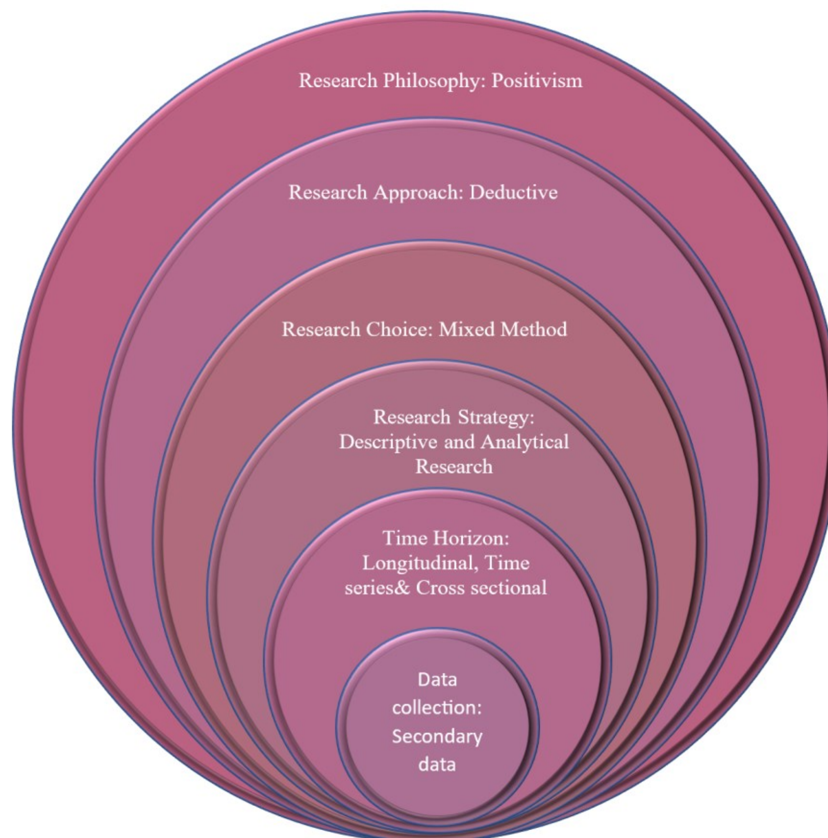
researcher through all the steps that need to be taken when developing a research methodology (Tengli, 2020). The study has adopted "Research Onion" model which has developed by (Saunders M. &., 2009).

Research onion

The concept of the "research onion" was developed by Saunders, Lewis, and Thornhill (Saunders M. &., 2009) to illustrate the process of creating a comprehensive research methodology. It presents various research methods and strategies in a layered model, with each layer representing a more detailed stage of the research process. The term was first introduced in the book "Research Methods for Business Students" and the layers of the "onion" serve as a metaphor for the steps taken in a research methodology, which should be peeled away as the research progresses.

Figure 1.4

Research onion



Source: (Saunders M. &., 2009)

Research philosophy

In this research the researcher has adopted 'Positivism'. Positivism is a philosophy that relies on empirical observations and statistical analysis to comprehend the world. It asserts that measurable and observable data is the most effective way to acquire knowledge.

Research Approach

In research, there are two main approaches: deductive and inductive. Deductive involves testing hypotheses based on a pre-existing theory, while inductive involves generating a theory from data analysis. Deductive is quantitative in nature, while inductive is qualitative.

In this study the researcher has adopted deductive approach.

Research Choice

Research choice refers to the selection of the methodological approach that a researcher adopts to gather and analyze data. "This layer of the research onion highlights a basic but important choice all researchers face when designing their research: whether to use a quantitative method or a qualitative method, or a mixture of both?" (Saunders, 2013).It is the fourth layer of the research onion model as outlined by Saunders, Lewis, and Thornhill. Research choice methods can be mono method, mixed method, or multi method. Mono method uses one method, either qualitative or quantitative, while mixed combines both. Multi method uses multiple types of the same method.

In this study the researcher has adopted mixed methods.

Research strategies

Research strategy deals with how researcher intends to carry out the study. There are various methods such as experimental, survey, case study, action research, archival research, grounded theory etc. In this research, the archival research method has been adopted. And also it is both descriptive, and analytical research.

Time horizon

The time horizon is another critical layer of research onion. According to Saunders "time horizon means the number of times data is collected by the researcher. It refers to the timeframe in which data are collected for the research." When a dataset consists observations of one sample at multiple time intervals, it is considered to be time-series data. If a dataset consists observations of multiple samples at multiple time intervals, then it is called longitudinal or panel data. If a dataset includes observations of multiple samples at one point or period of time, then it is called cross-sectional data.

In this study the researcher has collected time-series, longitudinal and cross-sectional data.

Data collection methods

This is the innermost layer of the research onion. This layer deals with data collection methods, analysis techniques, research strategies etc., in which the researcher has to finalize the design of the research.

Sources of data

Data used for this study has been collected from Secondary sources.

Secondary Data

Secondary data for the study mainly collected from Reserve Bank of India (RBI) website, CMIE prowess database and official websites of selected public sector banks.

Other sources used for data collection include the following:

1. SEBI website.
2. NSE website.
3. RBI bulletins.
4. Money control website.
5. Capital line website.
6. Website of selected banks.
7. Annual report of selected banks.

8. Corporate governance report of selected banks.
9. CSR report of selected banks
10. Research dissertations.
11. Periodicals
12. Working papers
13. Indian journal of corporate governance.
14. International Journal of Banking, Accounting and Finance.
15. Other Research journals.
16. Books related to the research.
17. Newspaper reports.
18. Magazine article.
19. Other websites

Period of the study

The study has taken a time span of 8 years, from 2014 to 2017 and 2019 to 2022. The merger year 2018 has excluded to generate accurate, consistent and meaningful insights. To assess market concentration and competition, the researcher considered all public sector banks in the industry from the period 2014-2022.

1.9 Description of models and variables used for the study.

Market competition & Concentration

Market competition is a term used in economics to describe the competitive dynamics among businesses within a particular market. The concept of market competition refers to competition between businesses in a particular market that sell similar goods and services. The goal of market competition is to increase revenue, profit, and market share growth. Competition has been the scientific and practical focus in the past decades, not only in the banking but also in other business industries around the world (Memic, 2015). Mergers and acquisitions (M&As) are significant corporate actions that can have a profound impact on market competition. M&As involve consolidating companies or assets, which can affect the companies involved and the industry in which they operate.

M&As can increase market concentration by reducing the number of firms in the market. If a larger company acquires a smaller competitor, the result could be increased market share for the larger company, thereby reducing competition. These two tendencies (competition and concentration) seem to contrast each other, if we accept the theoretical proposition according to which a more concentrated market implies a lower degree of competition due to undesirable exercise of market power by banks (Staikouras, 2005).Additionally, M&As can create barriers to entry for new firms. The increased size and resources of the merged entity might make it difficult for smaller, newer companies to compete.

When conducting empirical research to assess competition& concentration in an industry, there are two main approaches: structural and non-structural. In this study, only structural measures were used. Widely used Structural measures of competition are Concentration Ratio (CR) and Herfindahl's -Hirschman's index (HHI). These two models are used to analyze the competitive structure of India's entire public banking sector over the period 2014-2022.

Structural measures of competition

Structural analysis refers to the examination of the structure of the industry or market to understand the level of competition. Structural analysis, also known as traditional industrial organization analysis, primarily examines the structure of a market, specifically focusing on market concentration and the number of firms operating within the market. The structural approach is divided into two popular hypotheses: the Structure-Conduct-Performance (SCP) Hypothesis and the Efficient Structure Hypothesis (ESH).

The SCP Hypothesis, first introduced by Bain in 1951 (Bain, 1951), examine the relationship between market structure (refers to number and size distribution of firms in a particular market), company conduct (refers to the behavior of firms, especially the strategies they adopt to compete with each other) and performance (refers to the outcomes achieved in the market, such as profitability, productivity, efficiency, product quality). "SCP Hypothesis suggests that as market concentration increases in an industry, it leads to less competitive behavior among firms, ultimately resulting in

improved profitability" (Berger, 1995). "This hypothesis argues that more concentrated markets are more likely to be collusive, meaning that a small number of firms with a sizeable market share have greater market power, which promotes collusive behavior among firms and results in higher profits. According to this hypothesis, firm profitability is obtained from market power" (Das, 2018).

As a result, the Efficient Structure Hypothesis was developed by Demsetz in the year 1973 (demsetz, 1973). ESH suggests that a firm's profit is related to its efficiency, rather than its market power. ESH theory states that the positive correlation between profitability and market concentration is due to efficiency differences among firms, rather than market power. In SCP paradigm and a theory based on ESH, concentration ratios (CR), Herfindahl Hirschman (HHI)) indices are used to explain competitive performance in the banking industry (Pawłowska, 2016). The SCP form of analysis assumes that market structure significantly impacts the conduct and performance of firms within the market. The Concentration Ratio (CR) and Herfindahl-Hirschman Index (HHI) are examples of structural methods of analysis as they assess the distribution of market shares among firms in a given market.

Concentration Ratio (CR)

Concentration Ratio (CR) play a crucial role in capturing the structural characteristics of a market. As a result, they are frequently employed in structural models to explain the competitive performance of the banking sector as a reflection of market structure (Holck, 2010). The Concentration Ratio depicts the state of market concentration (Li, 2019). Concentration ratios can reflect changes in concentration as a result of the bank's entry into the market or its exit from it or caused by a merger (Lici, 2015). The k-bank Concentration Ratio provides a snapshot of banking industry by calculating the market share of the top 'k' firms. For example, a CR4 of 80% indicates that the four largest companies in the industry have control over 80% of the entire market share. It is a simple measure that provides a basic understanding of market concentration. However, it does not provide information on how the market share is distributed among these top companies and does not consider the influence of smaller

companies. Concentration Ratio is a ratio that represents the size of firms in relation to their industry as a whole.

In this study we have measured the Concentration Ratio of top three (CR3) and five (CR5) banks in the Indian public banking sector based on the market share percentage of assets, deposits, and loan. While CR3 is a frequently used metric, researchers or policymakers might also look at CR5, CR8, or even CR20, especially in industries with a large number of firms.

The Concentration Ratio is defined as:

$$CRk = \sum_{i=1}^{k} msi$$

Where, $MSi = \frac{\text{Market share of the i}^{\text{th}}\text{ firm}}{\text{Total market share of the industry}}$

Where ***CR*** is the concentration ratio, ***k*** number of largest banks, ***MS*** is the share of ***i***-th bank. ***MSi*** has to be arranged by size, from the bank with the largest market share to the one with the smallest (Descending Order).

The market share could be either sale, assets, deposits, loans, employment statistics etc. in this study, the researcher has chosen assets, deposits, and loans.

Concentration levels

Table 1.1

Market structure based on Concentration Ratio (CR)

Market structure	Concentration Ratio	
	CR3	CR5
Low concentration- Perfect competition	0% to 50%	0% to 60%
Medium concentration- Oligopoly	50% to 70%	60% to 80%
High concentration – Monopoly.	70% to 100%	80% to 100%

Source: Author's compilation.

The range of concentration ratios are 0% to100%. At the low end, 0 % Concentration Ratio indicates an extremely competitive market which means there is a perfect competition in the market. Under CR3 and CR5, Concentration Ratio ranges from above 0% to 50% and 0% to 60% indicates the transition of perfect competition. Concentration Ratio ranges from above 50% to 70% and 60% to 80% indicates the oligopoly. 70% to 100% and 80% to 100 % concentration ratios indicate the transition of market competition from oligopoly to monopoly. At the high end, a 100% Concentration Ratio means an extremely concentrated market with monopoly market condition.

The Herfindahl-Hirschman's Index (HHI)

The Herfindahl-Hirschman Index (HHI) is a commonly accepted measure of market concentration. HHI is calculated by squaring the market share of each firm (expressed as either fractions, decimals, or whole numbers) competing in a market and then summing the resulting numbers (Antitrust Division The U.S department of justice, 2018). The HHI value ranges from 0 to 10,000(or 0 to 1.0), with 0 representing the least concentrated and 10,000 representing the most concentrated industry. Competition is proxied by the measure of banking concentration, such as the Herfindahl-Hirschman Index (HHI) (Bikker A. , 2012). When market concentration is higher, there will be less competition, which means the market is a monopoly or close to a monopoly. HHI score 10,000 is an imaginary scenario where only one company operates in the industry, and it has 100% of the market share. In such situations, the HHI equals 10,000, indicating a monopoly market situation. When the HHI value is less than 1,500, it represents an industry with low market concentration and a competitive marketplace. An HHI value between 1,500 and 2,500 represents moderate concentration, and HHI values above 2,500 indicate a highly concentrated industry.

The U.S. Department of Justice (Antitrust Division The U.S department of justice, 2018) categorizes markets into three types based on the HHI score:

- Unconcentrated Markets: HHI score below 1,500. These markets have many players, and no single firm has a significant influence on market prices or outcomes.
- Moderately Concentrated Markets: HHI between 1,500 and 2,500. These markets have fewer players, and each firm might have some influence on market outcomes.
- Highly Concentrated Markets: HHI above 2,500. These markets are dominated by a few firms, which might have considerable influence over prices and other market outcomes.

Table 1.2

Market structure based on the Herfindahl-Hirschman's Index (HHI).

Market structure	HHI score
Low/Unconcentrated – Perfect competition	0-1500
Moderately concentrated- Oligopoly	1500-2500
Highly concentrated– Monopoly	2500 -10000

Source: Author's compilation.

HHI is the sum of the squares of the market share and is defined as:

$$HHI = \sum_{i=0}^{n} MSi^2$$

$$MS^2 = \frac{\text{Squares of the market share of the i}^{\text{th}} \text{ firm}}{\text{Squares of market share of the industry}} \times 100$$

Where ***MS*** is the market share of the **i-**th banks in the market and **n** the total number of banks. HHI captures the number of firms in the industry which is not considered in "k-bank" concentration ratio (Gajurel, 2012).

Corporate governance Index (CGI)

Methodology of Corporate governance index (CGI)

The insight for developing the structure and variables for the Corporate Governance Index (CGI) has been adopted from the various academic studies and reports. The CG

index developed for this study is inspired and adopted from various sources such as, the studies of (Rachita Gulati, 2019), (Tuteja, 2013), (Sandhya, 2020), companies act 2013, SEBI clause 49 and LODR. There are 50 governance norms in the index under six corporate governance dimensions namely, Board effectiveness, audit function, risk management, remuneration committee, shareholders right and information and finally disclosure and transparency. To determine the CG index score, the researcher primarily gathered balanced panel data from the annual reports and corporate governance reports of the chosen banks. In total, the researcher has analyzed 96 annual reports from 12 public sector banks spanning an 8-year period, from 2014-2017 (Pre-Merger) and 2019-2022 (Post-Merger). Thus, the researcher has collected 4800 (96*50) observations in total.

If the bank completely fulfils the governance norms, we assign the score "1". Score "0.5" is assigned if the bank partially fulfils the governance norms and a score "0" is assigned if the bank is failed to fulfil the governance norms.

Balanced Score Card Method

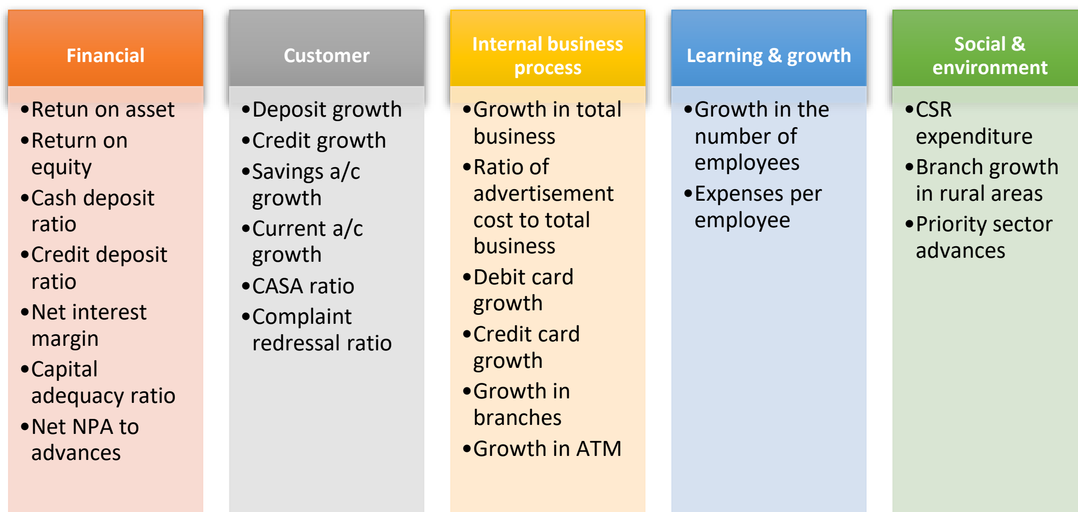
Robert Kaplan and David Norton first introduced the concept of the Balanced Scorecard (Kaplan, 1992). It is a framework for implementing and managing organization's vision and strategy. It provides a balanced view of an organization's performance by measuring it from four different perspectives. "Balanced scorecard is a comprehensive model that reports performance of banks anchored on the four key Performance Indicators (KPI) espoused by the balanced scorecard framework that could give feedback and useful information to internal and external actors" (Yahaya, 2002). Fig 1.6 shows the balanced score card model adopted for the study. In this model researcher has added one more perspective i.e., Social &environment. The balanced scorecard model used for this study has been adopted from the study of (Sharma S. , 2020).

Here, in this study, the researcher did not set target scores for Key Performance Indicator (KPI) measures. Instead of that, did baseline measurements. After that, conducted the paired sample t-test/ Wilcoxon signed rank test for each KPI indicator to check whether the mean difference of SBI during the pre-post-merger period is

statistically significant. To compare the KPI of SBI with other public sector banks, the researcher adopted the Kruskal Wallis test or ANOVA based on the normality of data. After that, did pairwise comparison or post hoc test to identify the exact variation of SBI with other public sector banks. By assessing performance across various KPIs, organizations can prioritize areas that need attention, even if there's no predefined target.

Figure 1.5

Balanced Score Card model adopted for the banking sector.



Source: Author's compilation.

Measurement unit for all these balanced scorecard variables are taken in percentage.

1. Financial Perspective: This perspective looks at financial goals of an organization. financial perspective examines data associated with to the financial situation (cash flows, profitability, and ratios) of the company (Akman, 2021). It deals with an organization's financial goals and enables managers to monitor their financial achievements and shareholder value. In this study researcher has chosen the indicators like Return on Assets (ROA), Cash deposit ratio, Credit deposit ratio, Return on Equity (ROE), Net Interest Margin (NIM), Net NPA to Advances, Capital adequacy ratio (CAR). Values of all the indicators were directly collected from RBI's report (Statistical Tables Relating to Banks in India, n.d.).

Return on Assets (ROA): The Return on Assets (ROA) is a financial measure that assesses a company's profitability in relation to its total assets. It indicates how effectively management is utilizing its assets to generate earnings. To calculate this metric, you divide the net income by the total assets.

Return On Equity (ROE): ROE (Return on Equity) is a financial performance metric that calculates by dividing net income by shareholders' equity. It indicates a company's profitability in relation to the equity owned by its shareholders. In essence, ROE is a measure of how efficiently a company is using its funds to generate profit growth.

Cash Deposit Ratio: The Cash Deposit Ratio (CDR) measures a bank's cash holdings against its total deposits. This is an important indicator of the bank's liquidity and capability to fulfill short-term obligations. When a bank has a higher cash deposit ratio, it means they have more cash available in comparison to their deposits. This can improve their liquidity and enable them to fulfill short-term obligations, such as depositor withdrawals.

Credit Deposit Ratio: Credit Deposit Ratio also referred to as Loan-to-Deposit Ratio, is a metric used to assess a bank's liquidity. It indicates the percentage of a bank's overall deposits that have been loaned out to customers in the form of credit or loans. When a bank has a higher credit deposit ratio, it means they are lending more of their deposits.

Net Interest Margin (NIM): The Net Interest Margin (NIM) is a crucial measure of profitability for banks. It calculates the difference between the interest income a bank receives from its loans and the interest it gives out to its lenders (such as depositors), in comparison to the amount of its interest-generating assets. If a bank has a high NIM, it indicates that they have efficiently handled their interest income and expenses. They may have accomplished this by providing loans at higher interest rates or acquiring deposits at lower interest rates. A high NIM could be a sign of a competitive advantage, such as a unique business model, a strong market position, or a talented management team that enables the bank to acquire less expensive funds and lend at higher rates.

Net NPA to Advances: The ratio of Net Non-Performing Assets (NPA) to Advances is a crucial indicator of asset quality in the banking sector. Non-Performing Assets refer to loans that are at risk of default due to the debtor's failure to make interest or principal payments for a specific period, typically 90 days. The Net NPA to Advances ratio is an important measure of a bank's loan portfolio quality. A higher ratio implies that a greater percentage of the bank's loans are non-performing, which can be a sign of lower asset quality. It is important to note that having a low ratio of Net NPA to Advances is generally considered preferable.

Capital adequacy ratio (CAR): The Capital Adequacy Ratio (CAR), also referred to as the Capital to Risk (Weighted) Assets Ratio (CRAR), is a metric that measures the financial strength and stability of a bank. This ratio shows a bank's capacity to endure some loss while complying with regulatory standards in a particular country. It's a crucial measure for ensuring that banks can meet their obligations and handle unforeseen losses.

2. Customer Perspective: This customer perspective focuses on the customers and market segments in which the organization compete (Batra, 2014). This perspective explains how an organization attain the customer growth via customer satisfaction as well as the metrics used to measure business performance from the customer's perspective. Market share, customer retention rates, customer loyalty, efficient customer complaint redressal cell etc., are the main customer-centric metrics. According to Kaplan &Norton (Kaplan, 1992) core customer perspective measures include customer satisfaction, retention, new customer acquisition, customer profitability and sustainable customer relationship. The aim of this perspective is to create value for customers to convert them into loyal customers.

In this study researcher has chosen the indicators like deposit growth, credit growth, savings account growth, current account growth, CASA ratio and complaint redressal ratio.

Deposit growth: Here, Deposits is the addition of demand deposit, savings deposit, and term deposits. Increasing deposit growth shows that the bank’s ability to attract new customers by receiving deposits and giving interest. It indicates the customer’s

confidence towards the bank. So, increasing deposits is a positive sign for banks. Deposit growth can be calculated as.

Deposit growth = $$\left(\frac{\text{Current year deposit} - \text{Previous year deposit}}{\text{Previous year deposit}}\right)\times 100$$

Credit growth: Credit growth represents the advances that banks lend to the corporates or individuals and receive interest. Growth rate in credit indicates the increasing customer base of banks with reasonable interest rate and smooth credit processing (Sharma, 2020). Credit is the combination of bills purchased & discontinued, cash credits, overdrafts, and loan plus term loans. Credit growth can be assessed as follows:

Credit growth = $$\left(\frac{\text{Current year advances} - \text{Previous year advances}}{\text{Previous year advances}}\right)\times 100$$

Savings account growth: Growth in savings account indicates the growth of customers with monthly and daily income. If a bank offers competitive interest rates on savings accounts, it can attract more people to open these accounts to earn more on their deposits. The customers can save their monthly salary or daily wages with the help of savings bank account. It can be treated as the indicator for customer satisfaction. Savings account growth can be calculated as follows:

Savings account growth =

$$\left(\frac{\text{Current year savings deposit} - \text{Previous year savings deposit}}{\text{Previous year savings deposit}}\right)\times 100$$

Current account growth: This shows an increase in the number of customers who are traders and entrepreneurs. When there's an increase in the number of current accounts, it can suggest that the economy is doing well because more people and companies are using these accounts to carry out transactions. When there is a rise in the number of current accounts, it can signify an increase in trust and confidence towards the banking industry. This is because individuals tend to feel more secure

with their funds in banks that provide better services. As a result, they are more likely to deposit their money with such banks. Current account growth can be calculated as follows:

Current account growth =

$$\left(\frac{\text{Current year demand deposit} - \text{Previous year demand deposit}}{\text{Previous year demand deposit}}\right)\times 100$$

CASA (Current Account Savings Account) ratio: The CASA ratio, which stands for the Current Account Savings Account ratio, is a crucial factor in determining a bank's financial well-being. This calculation involves dividing the deposits in a bank's current and savings accounts by its total deposits. Growth in CASA ratio indicates accumulating current and savings account deposit in the bank. It can be calculated as:

$$\text{CASA ratio} = \left(\frac{\text{Demand deposit} + \text{Saving deposit}}{\text{Total deposit}}\right)\times 100$$

Complaint redressal ratio: indicates the percentage of complaints resolved out of total complaints received. So higher complaint redressal ratio is good for banks. It leads to increased customer satisfaction. In this study the details required for complaint redressal ratio directly accessed from annual reports of selected banks.

3.Internal Business Process Perspective: This perspective emphasizes the essential processes that allow an organization to meet its stakeholder's expectations. This perspective deals with the strategies adopted by the organization to produce goods and services in the most efficient and effective methods (Alemayehu, 2020). The metrics chosen for this perspective should aid managers in determining the effectiveness of their business operations and whether their products and services meet customer requirements. Examples of these metrics may include measures of operational efficiency, quality of services, process management time, and technological innovation.

In this study the researcher has chosen the metrics like growth in total business, advertisement cost to total business, debit and credit card growth, branch growth and growth in ATMs.

Total business growth: It comprises of total deposit and total advances (Sharma S. , 2020). Increase in total business represent the efficient performance of bank and its ability to attract large customer base. Growth in total business can be calculated as follows:

$$\text{Total business growth} = \left(\frac{\text{Current year total business} - \text{Previous year total business}}{\text{Previous year total business}}\right) \times 100$$

Advertisement cost to total business: It is another indicator of internal business process perspective. This ratio helps to understand about the relationship between marketing/publicity expenses to total business. The advertising cost to total business cost ratio is a metric that indicates the percentage of a bank's overall expenses that are allocated towards marketing and promotion. The interpretation of this ratio may differ based on the circumstances. Lower advertisement cost with higher total business is perfect combination.

Debit and credit card growth indicates the sign of successful digital transformation and banks desire for innovation. This shows that the bank is able to meet the evolving demands of customers for transactions that are cashless. Banks make money from debit and credit card transactions through interchange fees. Merchants pay these fees for each transaction made with a card. If there are more cards in circulation, the fees may also increase, resulting in higher revenue for the banks. Debit card and credit card growth can be calculated as follows:

Debit card growth =

$$\left(\frac{\text{Curent year debit card distribution} - \text{Previous year debit card distribution}}{\text{Previous year debit card distribution}}\right) \times 100$$

Credit card growth =

$$\left(\frac{\text{Curent year credit card distribution} - \text{Previous year credit card distribution}}{\text{Previous year credit card distribution}}\right)\times 100$$

Growth in branches and growth in ATMSs: Indicates the increasing geographical reach of banking services. This is the sign of efficient banking operation that helps for the financial inclusion. Growth in branches and growth in ATMs can be calculated as follows:

Growth in branches =

$$\left(\frac{\text{Number of total branches in current year} - \text{Number of total branches in previous year}}{\text{Number of total branches in previous year}}\right)\times 100$$

Growth in ATMs =

$$\left(\frac{\text{Number of ATMs in current year} - \text{Number of ATMs in previous year}}{\text{Number of ATMs in previous year}}\right)\times 100$$

4. Learning and Growth Perspective: This perspective also called organization's capacity. It is largely concerned with employee training, corporate culture, leadership, knowledge management, innovations in technological and digital products and other aspects of human capital in the organization. This perspective is related to the employees of the organization, and it measures the extent to which the organization exerts efforts to provide its employees with opportunities to grow and learn in their domain (Abofaied, 2017).The perspective stresses the significance of competitive success through ongoing learning for individuals and organizations. The learning &growth perspective assess the effectiveness of employees in acquiring and utilizing knowledge and information to gain a competitive edge.

Under this perspective, the researcher has chosen the indicators "growth in the number of employees and growth in the expenses per employees".

Growth in the number of employees: With the rapid advancements in technology for banking products, services, and processes, it is essential to have highly skilled and

well-trained employees to ensure smooth operations. Increasing the number of employees leads to improved performance. growth in the number of employees can be calculated as follows:

Growth in the number of employees =

$$\left(\frac{\text{Number of employees in current year} - \text{Number of employees in previous year}}{\text{Number of employees in previous year}}\right)\times 100$$

Expenses per employee: It indicates how much a bank spends per employee. Higher spending on employees indicates that the bank is paying well for its employees' services. It tends to motivate employees to work with greater dedication and improve their productivity. It can be calculated as follows:

$$\text{Expenses per employee} = \left(\frac{\text{Payment and provisions for employees}}{\text{Total number of employees}}\right)\times 100$$

In addition to this perspective this study covers one more perspective by analyzing various works related to balanced score card method

5.Social and environment perspective: This perspective focuses on the contributions of the organization towards the environment and society. More and more companies are taking environmental responsibility seriously by incorporating environmental factors into their management processes. Many are even going beyond compliance and actively pursuing sustainable development. These companies are developing environmental strategies that aim to continuously improve their environmental performance (Monteiro, 2017).By considering the social and environmental impacts of their activities, companies can ensure their operations are sustainable in the long term. Under this perspective the study covers the indicators CSR expenditure, branch growth in rural areas and priority sector advances.

Corporate Social Responsibility (CSR): CSR is a company's efforts to evaluate and address its impact on both the environment and social welfare. In Corporate Social Responsibility (CSR) companies take responsibility for their impact on society. By practicing CSR, companies can be aware of their impact on the economy, society, and

the environment. This self-regulating approach helps companies be socially accountable and make a positive contribution to society. Every company need to spend 2% of their average net profit of preceding 3 years. As per the guidelines and mandate of Reserve Bank of India, State Bank of India is required to spend 1% of its profits on CSR (SBI, 2018). The SBI undertakes its CSR activities by its own and through SBI foundation. In this study we have considered the CSR spending of SBI not SBI foundation. CSR Contributions made by companies to state government funds are not considered part of Schedule VII of the Companies Act, 2013. Therefore, such contributions cannot be counted as admissible CSR expenditure. so, we have excluded banks contribution towards Chief Minister's Relief Fund, State Relief Fund for COVID-19 etc. CSR expenditure required for the study is taken from the annual and CSR reports of the selected banks.

Branch growth in rural areas: It indicates the commitment of banks to the society. It leads to financial inclusion. Branch growth in rural areas can be calculated as follows:

Branch growth in rural areas =

$$\left(\frac{\text{Current year branch growth in rural areas} - \text{Previous year branch growth in rural areas}}{\text{Previous year branch growth in rural areas}}\right) \times 100$$

Priority sector advances (PSA) ratio: The ratio of priority sector advances indicates providing loans and advances to agriculture, the MSME sector and other weaker sections of society. Increasing priority sector advances indicates banks commitment towards society and weaker sections.

1.10 Variables used for the study.

1. Market concentration
2. Market competition
3. Board effectiveness
4. Audit function
5. Risk management

6. Remuneration committee
7. Shareholders right and information
8. Disclosure and transparency
9. Return on Assets (ROA)
10. Cash deposit ratio
11. Credit deposit ratio
12. Return on Equity (ROE)
13. Net Interest Margin (NIM)
14. Capital adequacy ratio (CAR)
15. Net NPA to Advances
16. Deposit Growth
17. Credit Growth
18. Savings account growth
19. Current account growth
20. CASA ratio
21. Complaint Redressal Ratio
22. Growth in Total business
23. Ratio of Advertisement cost to total business
24. Debit card growth
25. Credit card growth
26. Growth in branches
27. Growth in ATM
28. Growth in the number of employees
29. Expenses per employee
30. CSR expenditure
31. Branch growth in rural areas
32. Priority sector advances (PSA) ratio

1.11 Conceptual model

Below is a graphical representation of the theoretical relationships between the variables, which is commonly referred to as the conceptual model or framework of the study.

Figure 1.6

Conceptual Model of the Study

Source: Author's Compilation.

1.12 Tools for data analysis

Various tools used to analyze the data.

1. Mean, standard deviation and percentage.

The mean, often referred to as the average, is a measure of central tendency. It is calculated by adding all the values in a data set and then dividing by the number of values. With the help of mean we can represent entire dataset with one number. The standard deviation is a measure of dispersion or variability in a data set. It tells us how much the values in a data set differ from the mean. A small standard deviation indicates that the values are close to the mean, while a large standard deviation indicates that the values are spread out over a wider range. It provides insight into the reliability and consistency of the data. percentage is a way of expressing a number as a fraction of 100. Percentages are used for comparing information of two different samples.

2. Paired sample t test

A paired sample t-test, also known as a dependent sample t-test or a paired t-test, is a statistical procedure used to determine whether the mean difference between two sets of observations is zero. This test is applied when the samples are dependent; that is, when there is a natural pairing of observations in the data.

The paired sample t-test works by first computing the differences between the paired observations, and then performing a one-sample t-test on these differences. The null hypothesis for the paired sample t-test is that the mean difference is equal to zero, while the alternative hypothesis is that the mean difference is not equal to zero.

The result of a paired sample t-test includes a t-statistic and a p-value. The t-statistic is used to determine whether the difference between the groups is statistically significant, while the p-value provides the probability of observing the given data (or data more extreme), assuming the null hypothesis is true.

3. Wilcoxon signed rank test.

The Wilcoxon signed-rank test is a non-parametric statistical test that is used to compare two related samples or repeated measurements on a single sample to assess whether their population mean ranks differ. It can be used as an alternative to the paired sample t-test when the population cannot be assumed to be normally distributed.

This test relies on observing the differences between paired data. The calculation involves finding the difference for each pair and ranking them based on their absolute values. These ranks are then given a positive or negative sign depending on the direction of the difference. The test statistic, W, is determined by adding up the ranks with positive signs.

The null hypothesis of the Wilcoxon signed-rank test is that the median of the differences between pairs of observations is zero. If the test statistic is significantly different from what would be expected under the null hypothesis, the null hypothesis is rejected, indicating that there is a significant difference in the median ranks of the two groups.

4. ANOVA

Analysis of variance (ANOVA) is a statistical method used to test the hypothesis that the means of two or more populations are equal. The test is applied to samples from two or more groups to determine whether the differences between the means of these groups are statistically significant.

5. Kruskal Wallis test

The Kruskal Wallis test is a non-parametric statistical test that is used to determine whether there are statistically significant differences between two or more groups of an independent variable on a continuous or ordinal dependent variable. It is the non-parametric alternative to the one-way ANOVA.

The Kruskal Wallis test works by ranking all the values from all groups together and then comparing the sums of these ranks between the groups. The null hypothesis of

the Kruskal Wallis test is that the population median of all of the groups is equal. It tests whether the observed difference in the ranking of data across groups could be due to chance.

6. Pairwise comparison test or post-hoc test

A pairwise comparison test, also known as a post-hoc test, is a statistical procedure used to determine which specific groups' means (if any) are significantly different from each other after obtaining a significant result from an ANOVA or Kruskal Wallis. This test is necessary because while the ANOVA or Kruskal Wallis test tells us that there are differences between groups, it doesn't specify which groups are significantly different from each other.

Software used for statistical analysis.

IBM SPSS Statistics, Version: 29.0.0.0 has used for the statistical analysis.

1.13 Limitations of the study

- Indian banking sector encompasses different banks such as commercial banks, cooperative banks, local area banks, regional rural banks etc. In this study, we have focused only on public sector banks.
- The study's methodological approach may not fully capture the complex dynamics of mergers and acquisitions. Hence, it is limited to a comparative study.
- Due to the ever-changing banking industry and economic conditions, the findings may only apply to specific time periods.
- There are several factors that may have impacted the growth and governance of the public banking sector, including the Covid-19 pandemic, currency demonetization, and government regulations. However, the study did not analyze the effects of these factors.

1.14 Structure of thesis

1. Introduction

This chapter provides a brief introduction to the topic being studied, as well as discuss its scope and significance. We will also outline the research problem and objectives, describe the research methodology and variables, and address the limitations of the study. By doing so, aim to provide a thorough background of the research.

2. Literature Review

This chapter deals with the previous studies related to the topic.

3. Theoretical background

This chapter provides an insight about the mergers and acquisitions, corporate governance, various committees related to the banking sector reforms and corporate performance in the Indian banking sector.

4. Market Concentration and competition of the public sector banks in India

This chapter include the analysis related to banking sector concentration and how it leads to reduction in competition.

5. Corporate governance Compliance practices

This chapter provides an insight into the SBI's corporate governance and further comparison with other public sector banks corporate governance compliance.

6. Mergers & acquisitions and overall corporate performance

This chapter compare SBI's overall corporate performance before and after mega merger. Also compares SBI's performance with other public sector banks performance.

7. Findings and Conclusions

Findings and conclusions derived from the analysis is recorded in this chapter.

8. Recommendations, Implications and Scope for further research

This chapter gives recommendations out of the findings and Scope for Further research in the specific area.

CHAPTER 2
REVIEW OF LITERATURE

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2.1 Introduction

Literature review is a fundamental assessment and consolidation of prior research conducted on a particular subject matter. Its purpose is to establish a foundation for comprehending the current state of knowledge about the topic, the methodologies employed, the findings, and any potential knowledge gaps. A literature review is an essential component of academic research papers, thesis work, and dissertations since it provides context, validates the importance of the study, and aids in defining the research methodology.

When conducting a comprehensive review, it is crucial to gather and scrutinize academic articles, books, and other pertinent publications. This critical evaluation enables the identification of key themes, debates, and patterns within the existing body of work. By synthesizing this information, the review offers valuable insight into the topic's progression and nuances, establishing a framework for future research. This framework ensures that areas that require further exploration are highlighted, thereby promoting a deeper understanding of the subject matter.

In this chapter, the reviews related to following areas are covered.

- Mergers & acquisitions and corporate governance.
- Mergers and acquisitions and corporate performance.
- Mergers and acquisitions and market structure.

The journals, theses, and publications have been collected from various sources and a brief narration about the relevant studies are given in this chapter in a matrix format.

2.2 Review of Studies

JOURNAL REVIEW

Table 2.1

Review of Journals

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
Agarwal, Ruby, Vichore Sarita and Gupta Maneesh (2020)	The Effects of Mergers and Acquisitions on the Performance of Commercial Banks in India	The objective of this study is to analyze the impact of mergers and acquisitions of State Bank of India, HDFC Bank, ICICI Bank, and Kotak Mahindra Bank between 2008 and 2018. The study aims to evaluate the financial performance of these selected commercial banks before and	It is a secondary data-based study. The study analyzed commercial banks that underwent mergers between 2008 and 2018.	CAR, Net NPA, ROA, PBT and IDR	CAMEL model component has been adopted to measure financial ratios and paired sample t test.	Based on the analysis, it is found that ICICI Bank performed the best after the merger and acquisition, followed by HDFC Bank and SBI. On the other hand, Kotak Mahindra Bank's performance has not been remarkable. However, Kotak Mahindra Bank has managed to maintain a positive PBT

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
		after the mergers, using the CAMEL model, which assesses Capital Adequacy, Asset Quality, Management Quality, Earning Quality, and Liquidity.				(Profit Before Tax) as compared to ABI, which has recorded a negative PBT.
Gulati, Rachita, Kattumuri, Ruth and Kumar, Sunil (2020)	A non-parametric index of corporate governance in the banking industry: an application to Indian data	The objective of this paper is to develop a non-parametric index of corporate governance for banks.	A popular version of the data envelopment analysis (DEA) approach, known as the constrained 'Benefit-of-the-Doubt (BOD)' model, has been used to analyze a data set of 40 Indian banks operating in	The variables used for this study includes board effectiveness, risk management, remuneration committee, disclosure and transparency and shareholders rights and information	Sensitivity analysis and Data envelopment analysis	it is found that, the banks in India have made significant efforts to comply with corporate governance regulations over the past decade. By applying the suggested framework, we can not only rank the banks based on their

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
			2017. The data set consists of 58 governance regulations defined by relevant jurisdictions. This methodological framework has been applied to provide a tailored analysis of the data set.			compliance with governance regulations, but also identify the strong and weak dimensions of governance for each bank. This identification can help in the redesigning of existing policies at both bank-level and industry-level, making it easier to improve governance standards overall.
Nazim Ullah and Junaidah Abu Seman (2018)	Merger and Acquisition in Indian Banking Sector: A Review of the Literature	Objective of This paper is to provides a thorough and extensive analysis of the literature on mergers and acquisitions.	This study is theoretical and analytical in nature. The researcher has reviewed more than 30 studies	Mergers and acquisitions, Islamic banking.	Descriptive in nature.	By analyzing various literatures this study concludes that there is a need for conceptual analysis and empirical study on

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
		discussion covers diverse theories and the impact of M&A on the performance of both conventional and Islamic banks. Moreover, scrutinize the factors that are associated with M&A activities.	from the period 1993 to 2017.			M&A in Islamic banking sector.
Ajayi Lawrence boboye& obisesan oluwaseun grace (2016)	The effects of mergers and acquisitions on the performance of banks in Nigeria	The objective of this study is to evaluate how mergers and acquisitions affect the banking performance.	This study adopted ex post facto research design. It is a Secondary data-based study.	Profit after tax, shareholder fund, total asset, loan & advances, total deposit	Augmented dickey fuller test (ADF), johansen co-integration test, error correction model(ECM)	Mergers and acquisitions have no impact on bank's performance, only strong banks can go for merger & acquisition to achieve the synergy. in order to curb financial crimes, banks should be discouraged from unethical banking practices.

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
Njogo B.O, Ayanwales& Nwankwo E (2016)	Impact of mergers & acquisitions on the performance of deposit banks in Nigeria	The aim of this study is to access the impact of mergers and acquisitions on the performance of Deposit Money Banks.	This study has collected Secondary data from annual reports and accounts of 19 selected banks from the period 2001 to 2010.	Return on asset, return on equity, net profit margin, asset utilization, equity multiplier, earnings per share, debt equity ratio, debt asset ratio & leverage ratio	Paired sample t test & augmented dickey fuller test (ADF)	It has been found that in Nigerian banking industry mergers & acquisitions are not actually the best reforms to upgrade the performance of banks.
Emy mashita yanan,sahibzada muhammed hamza & abdul basit (2016)	Impact of mergers and acquisitions on firms' financial performance: a study on united states of America	This study aims to analyze the impact of mergers on the financial performance of the firms.	This study is descriptive explanatory in nature. Secondary data used for the study collected from the annual reports of the firms.	Net profit margin, return on equity, EPS& sales growth	Paired sample t test, descriptive mean analysis	The merger& acquisition impact profitability of the company and enlarge their market share. moreover, these M&A'S improve the value of the shareholders through raising the demand dividends in the market stock.
Khondaker mizanur rahman& mark bremer (2016)	Effective corporate governance and financial reporting in Japan	This study explores the corporate governance and financial reporting	This study is descriptive nature. It narrated the current state of governance	Auditors' liability, window dressing in financial statements,	Study is narrative in nature.	The accurate and efficient financial reporting is the key to good corporate governance. The

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
		in Japan under the presumption that accurate financial reporting is a prerequisite for effective CG.	and financial reporting.	financial reporting standards, accounting disclosure.		main reason behind many of the corporate failures is fraudulent reporting. It's been in corporate governance , if the company's annual general meeting functions effectively and auditors produce accurate financial reports.
Nurhazrina Mat Rahim and Ruhani Ali (2016)	cross-border mergers and acquisitions (CBMA): a review on top six ASEAN country CBMA players	Objective of this paper is to examine the CBMA from selected ASEAN countries.	Secondary data-based study. This study reviews he six member countries of ASEAN which often go through CBMA. This study covered the period from 2002 to 2014.	Market return, bidder's return, governance standards, government policies	Descriptive in nature	This study was about to reveal the cross-border merger and acquisitions (CBMA) trends among the firms from top six ASEAN member countries. It has been found that ASEAN firm would gain in short term but loss in long term.

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
Ming-chang wu,Hsin-chiang lin,I-cheng lin &chung-feng lai (2015)	The effects of CG on firm performance	This study's objective is to examine the effect of corporate governance mechanism upon firm performance among listed and over-the-counter firms in Taiwan	This study is based on Empirical approach.	Return on assets, stock return	Panel data analysis, regression, correlation and Tobin's Q method adopted analyze data.	Board independence and insider ownership have positive impact on firm performance.
Anderibom, asauten samuila, obute &Christopher (2015)	The effects of mergers and acquisitions on the performance of commercial banks in Nigeria: Evidenced from united bank for Africa(UBA)	The primary objective of the study is to make a comparative analysis of the impact of mergers and acquisitions on the financial efficiency of banks in Nigeria.	This study is a Secondary data based study. Used CAMEL model for the analyzing framework of bank performance.	Liquidity, earnings efficiency, capital adequacy ratio, return on asset, profit before tax and investment deposit ratio.	This study used both descriptive and analytical tools. Paired sample t test, CAMEL model and different ratios.	It has been found that mergers &acquisitions have positive impact on the performance of the bank in terms of capital adequacy, asset quality, earnings efficiency and investment depoit ratio. At the same time M&A have negative impact on return on assets.
Nadia masud (2015)	Impact of mergers& acquisitions on financial	This study trying to examine does merger and acquisition affect	This study collected data from 2000 to 2012. The	Profitability measures like ROA, ROE, EPS.	Ratio analysis and Paired sample t test	The results of merger & acquisitions are visible only on

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
	performance of banks: evidence from Pakistan	the financial performance of the banks.	secondary data has been collected from annual reports, profit and loss statement, balance sheet and cash flow statement of selected banks			long run. In longer run we can say that banks have slightly shown improvement in their financial performance even if the results of the first year of merger were declined but within the passage of time it increased and a continues to improve.
Muhammed ahmed & zahid ahmed (2014)	Mergers& acquisitions: effect on financial performance of manufacturing companies of Pakistan	This study trying to fulfill two objectives. Firstly, to analyze how mergers and acquisitions impact the liquidity, profitability, efficiency, and capital performance of Pakistani manufacturing firms operating in the manufacturing	Study is Secondary in nature. Analysed 12 mergers from the period 2000 to 2009.	14 financial health indicators such as; current ratio, quick ratio, debt-equity ratio, debt ratio, ROC,ROE, gross profit, net profit, operating profit, fixed asset turnover, asset turn over, sales growth, EPS & breakup value per share	Paired sample t test	Overall financial performance of acquiring manufacturing corporations insignificantly improved while the efficiency deteriorated in after merger period. it is finally concluded that merger impact on different industries

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
		sector of Pakistan secondly, to analyze the impact of mergers and business takeovers on the liquidity, profitability, efficiency, and capital position of various manufacturing companies in Pakistan's economy. These industries include textiles, spinning, cement, automobiles, electronics, chemicals, and sugar.				of manufacturing sector is different
Ronald stunda (2014)	The market impact of mergers &acquisitions on acquiring firms in the U.S	The objective of this is to examine the share price behavior of publicly traded firms that is considered as the	This study covered three years spanning from 2009 to 2012. Lexis-nexis and electronic data gathering	Security prices, industry membership	Ordinary least square (OLS), regression, variance inflation factor(VIF)	When acquiring firms are compared to firms not engaged in M&A activities, the acquiring firms' stock price

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
		acquiring firm in the U.S.	analysis and retrieval database used for collecting the secondary data.			effect is significantly negative, while the non M&A firms' stock price is significantly positive.
Adebayo, mudashiru Ibrahim, A.O bakare yusuf, babatunde omah, Ishmael (2014)	Good corporate governance and organizational performance: An empirical analysis	The main objective of this paper is to examine the relationship between corporate governance and organizational performance.	Simple random sampling used to obtain the representative samples for the study. Questionnaire used to collect the primary data from 70 respondents.	Organizational performance, decision making, asset management, competitive advantage	Karl Pearson's product moment Correlation and regression	It was discovered that the adoption of good corporate governance practices enhances transparency of company's operations, ensure accountability and improves firm's profitability. it also helps to protect shareholders' interest. With good corporate governance, the company can generate more resources to create more employment opportunities.

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
Ayesha Alam, Sana Khan & Dr. FareehaZafar (2014)	Strategic management : managing mergers &acquisitions	Objective of this study is to give a detailed description about strategic mergers.	This study is Descriptive in nature. Analyzed various case studies and gave an insight about mergers and acquisition.	Strategic rationale, political rationale, speculative rationale, business redefining rationale	Graphs &charts	In this study it has been state that M&A is one of the important strategic tools to survive in the competitive business environment. It says that essence of M&A is synergy.
Mohi-ud-Din Sangmi &, Sumaira Jan (2014)	Corporate Governance Policies in Indian commercial Banks: An Empirical Analysis	Objectives of this study is to analyze the reasons behind code of corporate governance, assess the availability of corporate governance in banks and to study the issues related to corporate governance.	This study has conducted in the year 2013. It is an Empirical analysis. Both secondary and primary sources used to collect the data. Questionnaire used to collect the primary data.	Reasons for the written code of corporate governance, availability of corporate governance policies, distribution of related material to concerned parties, issues in code of conduct and other components of corporate governance	Average, standard deviation& t test	The study found that the governance policies of each company vary from the legal and cultural scenarios in which they are operating. A good corporate governance policy is very important to create shareholders value and to build up a confidence among customers.

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
Dr. R. Seenivasan (2014)	Corporate Governance Issues in Banks in India	This paper trying to identify major issues in corporate governance in Indian banking sector and tries to provide suggestions.	This paper is narrative nature. It trying to explore the CG issues in Indian banking sector.	Responsibilities of Individual Members of the Board of Directors, the composition of the board, the roles and functions of the board, the committees of the board, related party transaction & disclosure	Descriptive in nature.	This study says that corporate governance is certainly a contributing factor. The corporate governance in banks should be strengthen.
Branko Matić & Nikola Papac (2014)	Measuring the quality of corporate governance in the banking sector of Bosnia and Herzegovina	The purpose of this study is to establish a set of standards for assessing the level of corporate governance in Bosnia and Herzegovina. These guidelines will be applied to evaluate the corporate governance system	In this study the researcher has made a comparison of various indices for measuring the corporate governance. Developed Bosnia and Herzegovina Corporate Governance index (BHCoG)	Ownership concentration in banks, transparency of banking business, financial reporting, and auditing of annual reports	Index analysis	The ultimate aim of this study was to define set of criteria to measure corporate governance. it has been found that if we improve business transparency, cooperation among governing bodies etc. through we can attain good

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
		in banks within the country.	for measuring CG in Bosnia.			corporate governance.
Andreea Nicoleta popovici (2014)	The impact of mergers and acquisitions on the market value of shares of Erste bank group	The objective of this study is to analyze the short term of impact of mergers on bank performance.	Secondary data-based study. The Chow Breakpoint Test is used to assess the impact of acquisitions on a credit institution's market value. The test identifies differences in equations estimated by sub-sampling. A significant difference would indicate a structural change.	Market price shares, the market index, abnormal return	Econometric analysis, chow break point test, F test(econometric analysis).	In this study by using chow break point test, it's been found that the value of shares does not improves after M&A.
2013 Igor todorovie (2013)	Impact of corporate governance on performance of companies	This study aims to assess how the implementation of corporate governance affect	This study is based on Secondary data. The data was collected from 19 companies listed on the Official	Net profit margin and earnings per share used to assess the level of CG performance. score card analysis consists	In this study the Score card analysis has been used to analyze CG performance.	The companies with higher level of implementation of CG principles have higher net profit margin and EPS while

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
		the company's performance.	market of the Banja Luka Stock Exchange.	of seven areas such as Commitment to CG principles, shareholders rights, treatment of shareholders, role of shareholders in CG, transparency, role and responsibility of board		companies that have lower level of implementation of CG principles have lower or negative net profit margin and lower EPS.
Priyanka aggarwal (2013)	Impact of corporate governance on corporate financial performance	This study aims to provide an overview of various components of corporate governance. To provide literature review on the relationship between corporate governance and corporate financial performance; and To examine the impact of corporate	This study is based on Secondary cross-sectional data. The sample includes 20 Indian non-financial companies, which are listed on the NSE.	Return on Assets (ROA), Return on Equity (ROE), Return on Capital Employed (ROCE) and Profit before Tax (PBT) - have been used as proxies for financial performance. Financial performance, size of the firm, employee's performance,	multiple regression, correlation, t-test and F-test used to analyze the data.	Corporate governance rating has a significant influence on financial performance. Hence governance and financial performance are correlated. Along with improving financial performance companies should also improve good

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
		governance on financial performance of firm in an Indian context.		governance rating of the firm.		governance in organization.
Issac marfo oduro & Samuel kwaku agyeyi (2013)	Mergers & acquisitions and firm performance: Evidence from the Ghana stock exchange	This study hopes to determine the effect of M&A on the performance of selected companies in the Ghana Stock exchange.	This study was based on five listed firms in Ghana from the period 1999 to 2010. Panel data methodology has been adopted to examine the effect of mergers on performance of listed firms in Ghana.	Return on asset, Return on equity, Profitability & financial performance	Independent sample t test and univariate analysis	Mergers and acquisitions have negative impact on the return on equity of the merged firm. Result also shows that M&A is not the only factor that harm merged firm's profitability but also firm risk and firm size.
Prof.sumedha tuteja& Dr.c s nagpal (2013)	Formulation of corporate governance index for banks in India	The objective of this study is to determine the important and most critical factors that are responsible for evaluating the effectiveness of corporate	This study is Explorative in nature. The researcher has created a corporate governance index for banks in India. SEBI clause 49 has been taken as	Board of directors, audit committee, remuneration committee, risk management, related part disclosure, nomination committee	Corporate governance index.	Have developed a corporate governance index especially for Indian banks. The study links both the assessment and places factors critical for evaluation of corporate

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
		governance of banks in India.	benchmark for developing this index.			governance of banks in the CG index.
Dr.k.b singh (2013)	The impact of mergers &acquisition son corporate financial performance in India	This study mainly focusing on two objectives. First one is To analyzes the profitability of merged companies by comparing key financial ratios during pre and post merging year. and the second one is to analyze the change in financial leverage due to M&A.	This study depends on Secondary data. Sample size of the study was 20 public listed companies in the year 2005 which undergone mergers and acquisitions.	Financial ratios such as Operating profit, gross profit, net profit, return on net worth, return on capital employed and debt- equity ratio used as variables for the study.	Mean, paired sample t test	Mergers& acquisitions is an effective method of corporate restructuring and can adopt as a long-term business strategy of corporate in India.
Yong liu, yongquing wang (2013)	Performance of mergers &acquisitions under corporate governance perspective - based on the analysis of Chinese real estate listed companies	This paper is trying to assess the impact of mergers and acquisition on corporate performance.	This study collected data from the real estate companies listed on the Shanghai and Shenzhen stock exchanges which M&A which happened during 2008 to 2009.	Market value, board size, institutional investors, chairman-CEO duality, employee value, purchase cost	Tobin's Q, robustness test, correlation	The concentrated ownership alignment effect dominates the entrenchment motives and act as a different mechanism to prevent controlling shareholders from managing earnings

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
			Collected data from the CSMAR database.			in stock financed M&A. The board inefficiency results in the failure of bringing benefits to the company. in China's financial markets, institutional investors who engage in speculative activities will spare no effect in pushing stock prices up for their own interests.
Neelam Rani, Surendra S. Yadava and P. K. Jaina (2013)	Impact of Corporate Governance Score on Abnormal Returns of Mergers and Acquisitions	This study attempts to investigate whether differences in the quality of firm level corporate governance influence short-term performance of acquiring firms.	Empirical analysis. This study collected data with the help of survey method. Based on the sample of 155 companies completed merger from the period of 2003 to 2008.	Agency cost, abnormal return	Index analysis	The study reveals that the companies (public listed companies) which have higher corporate governance score have better short term performance, positive and higher abnormal returns.

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
Yong Liu, Yongqing Wang (2013)	Performance of Mergers and Acquisitions under Corporate Governance Perspective — Based on the Analysis of Chinese Real Estate Listed Companies	The primary objective of this paper is to comprehensively analyzes the influences of corporate governance on acquiring companies' M&A performance. Secondly, this paper also examines factors that may influence the M&A performance.	This is a Secondary data-based study evaluating 36 M&As in China's listed real estate companies. This study cover the period of one year.	This study has taken market value, Board's size and shareholders degree as dependent variable. Explanatory variables taken for the study includes institutional investors, chairman- CEO duality, Time to market and purchase shares. The selected control variables include purchase costs, cost per and employee value.	Correlation, Regression and Tobin's Q	This study concludes that "the concentrated ownership alignment effect dominates the entrenchment motives and acts as a deterrent mechanism to prevent controlling shareholders from managing earnings in stock-financed M&A. Besides, State-owned enterprises should take full advantage of social market economy, improving their own internal checks and balances and the equity voting system".
	The effect of reference point	Objective of the study was to analyze the effect	Secondary Data related to M&A deals has	Bidder's offer price, bidder announcement	Mean, standard deviation, regression,	It has been found that reference point prices play

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
Malcom baker, xin pan, Jeffery wurgler (2012)	prices on mergers and acquisitions	of the target's past peak prices on various aspects of merger and acquisition activity.	collected from Thomson financial.	effects, deal success & merger waves	Robustness test and falsification test.	an important role in the decisions which is related to merger.
Talat Afza and Mian Sajid Nazir (2012)	Role of corporate governance in operating performance enhancement of mergers and acquisitions in Pakistan	Objective of this study is to investigate the role of corporate governance in explaining the post-merger operating performance in financial sector of Pakistan.	Secondary data-based study. Financial sector M&As which was happened between 1996 to 2008 has selected as sample for the study.	Operating cash flow, board size, CEO duality, board independence and institutional ownership	Regression, robustness analysis, Kolmogorov-Smirnov test and durbin- Watson test,	This study concludes that effective corporate governance mechanism plays a vital role to protect the interest of managers and shareholders and to increase value for the firm. An acquiring firm with good corporate governance profile helps to make merging and acquisition process smoother.
Nadiya doytch & esin cakan	Growth effects of mergers and acquisitions: a sector level study	Objective of this study is to examine the growth effect of	This study is based on Empirical research. The	GDP, primary sector value added, manufacturing	Correlation, time series analysis	It has been found that the merger &acquisition activity in OECD

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
(2011)	of OECD countries	both domestic and cross-border mergers and acquisitions.	paper employs a growth model that is rooted in the neoclassical Solow-Swan, Ramsey-Coopmans-Kass model. This model takes into account the difference between initial per capita output and its steady-state value and posits that countries that begin below their steady-state levels of output experience faster growth than those that start closer to their steady-state levels.	value added, service value added		countries does not causes economic growth. While examining the M&A impact on both the aggregate and sectoral levels, most of the effects uncovered are negative. the general findings reveals that M&A activity does not spurs economic growth.
Saw imm song, choir choo kueh, rashidah abdul	Performance of cross –border merger and acquisitions in	Objective of this study is to measure the performance of cross border	Secondary data for the study is collected from the M&A database. Both financial	Industrial background, sectoral breakdown, home	Tobin's Q	Governments are encouraging consolidation in banking and other industries. there

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
rahman& ei yet chu (2010)	five east Asian countries.	mergers and acquisitions.	and market data were collected. This study covered the period of 13 years.	country of the acquiring firm		are changes in the regulation and incentives provided by governments to recruit investors to invest in the manufacturing and high-tech industries through the provision of tax incentives to attract foreign investors. MNC'S are increasing their investments in this region to achieve greater economies of scale and are also expanding their markets via cross selling of their products & services to consumers in different countries.
Neelam rani, surendra s. yadav	The Role of Corporate Governance on Financial	This study aims to analyze the role of corporate governance on	This study is based on the 58 manufacturing and 35 service	Accountability, transparency, independence, management	Percentage, ratios, t test and index analysis	This study reveals that the companies with good corporate

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
and p.k. jain (2009)	Performance Changes Associated with Mergers and Acquisitions	financial performance of selected companies.	companies which has completed its merger during 2003 to 2006. Secondary and primary data used for the study.	discipline, responsibility, fairness, social responsibility, and recognition.		governance and performance have better financial ratios. Good governed companies bring positive synergies from their M&A activities.
Sandra A.waddock & Samuel B. graves (2006)	The importance of mergers and acquisitions on corporate stakeholders practices	The objective of this study is to analyze the impact of mergers and acquisition on corporate responsibility.	Secondary data empirical analysis. This study gathered the information from 1993 to 1997. In this study the corporate stakeholder practices were considered as corporate responsibility.	Community, diversity, employee, environment product, corporate governance	Correlation, paired sample t test, wilcoxon test	It makes clear that stakeholder practices do not seem to generally play into acquisition and merger decisions. Few differences exist between target and acquiring firms in their stakeholder practices, hence forth an resource based view(RBV) of the firm does not appear that stakeholder practices are recognized as strategic resources

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
						in the merger & acquisition process.
Anant K. Sundaram (2004)	Mergers and acquisitions and corporate governance	Objective of this study explore the Advances that happened in mergers and acquisitions.	Descriptive study based on secondary data	Market reaction and market structure	Descriptive in nature	Study concludes by revealing that not all the mergers and acquisitions lead to 'disappointment'. Quite the opposite that a well-prepared mergers and acquisitions lead to value creation to both the parties and it's less disappointing.
Dimitrios maditinos, nikolaos theriou& efstathious demetriades (1999)	The effects of mergers & acquisitions on the performance of companies-the Greek case of ioniki-laiki bank and pisteos bank.	The objective of this study is to measure the influence of mergers and acquisition on the firm performance.	Empirical research. Secondary data-based study covering the period of one year. include 250 observations of daily closing price of the ioniki-laiki bank and pisteos bank.	Solvency, stock price, stock index	Regression, time series analysis, market index model, capital asset pricing model (CAPM),unit root test and GARCH effect test.	The stock performance of the bank is not the important factor to appreciate the performance of the bank, since the stock value is many times the result of speculative actions, wrong

Author & year	Title	Objectives	Methodology	Variables	Tools used	Findings
						expectations or simply a game of the fortune. much more informative for the merger success is the study of the balance sheet and profit &loss account.

THESIS REVIEW

Table 2.2

Review of Thesis

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
Dr.Nayantara Padhi and Dr. Kamal Vagrecha (July 2019)	National Foundation for Corporate Governance (NFCG)	A Study on Corporate Governance Practices of Indian Financial Sector Companies	To analyze the CG practices in Indian financial sector, construct CG index for financial sector, analyze the correlation between the financial performance of FIs with the CG index, performance and board size, performance and proportion of independent directors on the board of directors, performance of FIs and the size of the audit committee, performance of FIs and proportion of woman member in	In this study the researcher has focused on the corporate governance practices existing on the financial institutions in India. In order to study the prevailing corporate governance practices, the researcher has developed corporate governance index. Sample of the study consist sixteen banks, eight from public sector and remaining eight from private sector. This study was depended mainly on secondary data sources. Majorly data were collected from the annual reports of	The basic objective of this study is to quantify the impact of corporate governance of the financial institutions. Functions of the banks and other financial institutions differ with other corporate entities in many ways that makes corporate governance of financial sector very unique and critical too. Findings say that one of the important hindrances for good corporate governance is NPA

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
			the board of directors. And analyze the variance in CG index pre and post implementation of amendments in the Companies Act, 2013 and SEBI (LODR) Guidelines, 2015.	the respective financial institutions, websites of NSE, BSE and RBI from its database on Indian banks. The timeframe of analysis was from FY 2011-12 to 2015-16. For examining the correlation between corporate governance and bank performance ordinary least square (OLS) have been used. Apart from OLS the researcher has used correlation matrix, t-statics and f-statistics for analysis purpose. ANOVA has been used in order to find the variance in corporate governance practices among various sub-samples.	ratio. Higher NPA ratio worsens the corporate governance.
Nitu Rana (2017)	Maharshi Dayanand university, Rohtak	CORPORATE GOVERNANCE IN LIFE	Major objectives include identify the CG norms in life insurance sector in	This study is descriptive and exploratory in nature. It includes both	Aim of this study was to discover and check corporate governance

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
		INSURANCE SECTOR IN INDIA	India, identify the correlation between CG norms and growth of life insurance sector and finally to study the CG on CSR.	primary and secondary data. In order to collect primary data survey method was adopted. Data was collected from the insurance companies in India. The statistical techniques used for analysis are independent sample t test, multiple regression, Karl Pearson's correlation coefficient and Shapiro wilk test	practices followed by the life insurance companies in India. In order to measure performance of corporate governance, corporate governance index (CGI) has been made. Study says that IRDAI should insist all the life insurance companies to follow the corporate governance norms so that can more strengthen the performance of life insurance sector.
2017 NEELAM BARADWAJ (2017)	Jain university, Bengaluru	CORPORATE GOVERNANCE REPORTING PRACTICES IN INDIA	Main objectives consist of identify the disclosure and transparency in the annual reports, find out the impact of	In this study the 100 samples of companies are taken from NIFTY which represents 38 sectors of the economy. Both	This study made a disclosure index on the basis of mandatory provisions of clause 49. With the help of

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
			board composition, to know the level of general perception about CG among company secretaries.	primary and secondary data used. In order to collect primary data questionnaire and interview method adopted. To test the hypothesis apart from the basic statistics t' test, chi square test, correlation and multiple linear regression methods have been used.	this index tried to find out the disclosure level of companies on the basis of annual reports. After analyzing the annual reports, it has been found that there are many issues regarding disclosure practices related to corporate governance.
NIMAS MEILIA HAQI (2017)	ERASMUS UNIVERSITY ROTTERDAM, ERASMUS SCHOOL OF ECONOMICS	DOES CORPORATE GOVERNANCE INFLUENCE MERGER AND ACQUISITION PERFORMANCE?	Analyze the relationship between M&A performance during announcement date and board size.	This study is a descriptive in nature. In this research the sample selection starts by defining merger and acquisition activities. In order to collect data mainly depended on secondary sources. Thomson one database, warton research data service data base, shareholder services data base and	The research question for this study was whether the merger and acquisition affect corporate governance. In order to study this research question the researcher has divided the corporate governance into three sections. Which consisting of board of director

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
				compustat database are major sources depended to collect secondary data. Merger and acquisition has chosen as dependent variable for this study. Board characteristics, board size, board composition, board leadership, executive compensation, ownership structure, block- holders and institutional ownership are comes under the independent variable. Control variables have been divided as two sets such as acquirer firm characteristics and bidder characteristics. Many control variables comes under these two heads. For	structure, executive compensation, and ownership structure. By setting three hypotheses researcher analyzed these three corporate governance structures. In conclusion, as a result this study provides us that there is a relationship between merger and acquisition and corporate governance. The result of this thesis provides insight to academic and business world which relates to merger and acquisition and corporate governance.

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
				calculating the collected data ordinary least square (OLS) model has been adopted.	
PANARI SANDEEP SAMBHAJI (2017)	UNIVERSITY OF PUNE, POONA College OF ARTS, SCIENCE & COMMERCE CAMP, PUNE 411001	A STUDY OF CORPORATE GOVERNANCE PRACTICES OF INDIAN BANKS WITH REFERENCE TO PRIVATE SECTOR BANKS	Explore the emerging issues related to CG, study the CG framework in India, study the trends regarding reforms and recommendations done regarding CG in India and to analyze the implementation of CG code.	This study is confined only to the corporate governance and banking in private sector. The duration scope for this study is from 2009 to 2012. This study satisfied six objectives by setting three hypotheses. The researcher selected eight private sector banks for this study. Mainly depended on secondary sources which are obtained from corporate governance reports of selected banks. Basic statistical tools like average, percentage, division, subtraction etc have been used.	Banking is the backbone for economic development of an economy. Banking has become complex and it has been observed as there should be proper internal control than external management. In this study the researcher has studied eight private sector banks such as 1.Axis Bank 2.Dhanlaxmi Bank 3.ICICI Bank 4. IndusInd Bank 5. Jammu and Kashmir Bank

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
					6. Lakshmi Vilas Bank 7. South Indian Bank and 8. Yes Bank. The study has been recognized that the bank should give more importance to qualitative standards such as internal controls and risk management, composition and role of the board and disclosure standards. The researcher says that proper implementation of corporate governance attributes can reduce frauds in banking sector. The researcher says that there is no much difference in the corporate

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
					governance of public sector banks and private sector banks because in India banking is governed by some statutory act so there is lesser possibility of differences. The degree of applicability of corporate governance standards may vary from public to private sector banks. While considering transparency and disclosure, public sector possess more than private sector.
NIMESH P RAVAL (2016)	The sardar Patel university	A COMPARATIVE STUDY ON CORPORATE GOVERNANCE PRACTICES OF SELECTED B.S.E. LISTED COMPANIES IN INDIA	The objective of this study includes to document the CG practices within various groups of industry, to examine the	It is an empirical nature study. Stratified sampling method has been used. India's top five sectors was selected for the study such as	This study was focused on the disclosure practices of sampled companies. Appointment and reappointment,

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
			CSR practices and transparency and disclosure of CG practices.	IT sector, healthcare &pharmaceutical, capital goods sector, metal and FMCG sector. The study was mainly depended on corporate governance disclosure index (CGDI). To test hypothesis ANOVA has been used.	material transaction among board and management, loan and advances to group companies and parameter of audit of environment are the factors which are highly disclosed and have CGDI score of 100%. The disclosure of price sensitivity of sampled companies is least disclosed item (0%) as per CGDI.
SHEFALI D. ZALA (2016)	Saurashtra university, Rajkot	A STUDY OF CORPORATE GOVERNANCE PRACTICES IN TOP TEN COMPANIES OF BSE-100	The important objectives of this study is to document the Corporate Governance practices in top-ten BSE companies, To evaluate the various Committees Performance like	It is a secondary data-based study. This study focused on the top 10 companies listed on BSE- 100. Stratified sampling method is adopted. To test hypothesis percentage analysis, mean, ANOVA, t test has been used.	After studying corporate governance disclosure practices and in-depth analysis and interpretation of the collected data, it is observed that out of 26 parameters of corporate governance 15

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
			Audit Committee, Remuneration committee, Customer Service Committee etc., To analyze the disclosure of Financial Aspects with Corporate Governance Practices, To study and understand Shareholders Interest and Satisfaction with Corporate Governance requirements, To study the Transparency and related disclosure and To analyze/ document Customer Care, Grievances and Social Responsibilities and Corporate Governance in companies		parameters shows excellent disclosure. That means maximum number of parameters are disclosed properly. Very poor disclosures are under the parameters like composition of committee, nomination and remuneration committee, CSR committee and risk management committee.

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
MEGHNA GOEL (2016)	Jamia Millia Islamia, New Delhi	IMPACT OF CORPORATE GOVERNANCE ON FIRM'S FINANCIAL PERFORMANCE AND ADOPTION READINESS IN MSME SECTOR	The objective of this study is to study the impact of corporate governance practices on firm's financial performance among the listed companies in India.	This study is empirical in nature based on quantitative secondary data and adopted a similar methodology which is employed in the prior studies. leadership structure, board independence, Board committees and corporate reporting practices are the main variables chosen to study about impact of corporate governance. There were twelve null hypotheses that were framed to test the impact of corporate governance on firm performance. Analysis of Covariance (ANCOVA) test was applied to	From this study it has been found that the specific corporate governance variables that impact firm value are (i) board independence (ii) board. Committees and (iii)corporate reporting. However, this study found no impact of leadership structure on firm value in Indian companies and hence it supports the Stewardship theory in context of Indian firms.

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
				Study the impact of corporate governance on firm performance.	
JYOTI (2016)	Haryana school of business, guru jambheshwar University of science & technology Hisar	IMPACT OF CORPORATE GOVERNANCE ON PERFORMANCE OF INDIAN FIRMS	Major objectives include to examine the relationship between CG and corporate performance, To investigate whether there are differences in technical efficiency, technical change and total factor productivity between firms listed in India and To analyze the effect of investor protection on firm valuation	This study is empirical in nature. Adopted secondary data method. For the purpose of analysis data is collected from PROWESS database. Variables used for this study are return on asset, return on equity, Tobin's Q to measure the market's perception about the firm's future profitability, market to book value, cash flow from operations and assets growth. In order to study the impact of corporate governance on firm performance constructed a corporate governance index. Along with the CG index, Malmquist TFP index and	This study has investigated the relationship between corporate governance index and financial performance, total factor productivity, investor protection. Corporate governance is a multi-dimensional concept, and it can be divided in to two such as internal mechanisms and external mechanisms. In this study it has been focused and measured the internal governance mechanisms such as Board of directors, Audit committee,

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
				investor protection index were developed. In order to study about the productivity of the firm Malmquist total factor productivity index used and to analyze the level of investors protection in the firm, we constructed investor protection index. Statistical tools used for this study are panel regression, fixed effect model, random effect model, redundant likelihood ratio test and DEA – Malmquist Productivity Index.	Remuneration committee, Shareholder and investor grievances committee and Ownership structure. Indian companies have to go beyond the essential l norms of corporate governance disclosure Indian companies have to go beyond the essential norms of corporate governance disclosure Practices in order to get more transparency and higher levels of governance. They should Disclose more and more information. To attract investors

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
					companies, have to fulfill mandatory. As well as non-mandatory recommendations.
KUMARAN.V (2016)	Department of management studies university of madras, Chennai	IMPACT OF CORPORATE GOVERNANCE, TRUST AND CUSTOMER LOYALTY ON CORPORATE REPUTATION	Major objectives include To assess the relationship of corporate governance and it dimension affects the corporate reputation, To examine the effect of “discipline, fairness and equity, fairness and equity, independence, accountability and responsibility, and social awareness” of corporate governance on corporate reputation of the bank.	This study was conducted among the banking investors, customers and financial professionals in the area of Chennai Tamil Nadu, based on both primary and secondary data sources. In order to collect the primary data judgmental sampling method was adopted. Researcher has used the questionnaire to collect the primary data. Discipline, fairness, independence, responsibility, accountability, social awareness,	This research was aimed to figure out the relationship between corporate governance, trust and customer loyalty on corporate reputation of non-banking financial corporations’ (NBFC’s) in Chennai, Tamil Nadu. Hence this research has made major contributions in the field of banking. In these days reputation is the most important aspect of any business especially in banking. Because in this competitive world reputation

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
				transparency and trust treated as the independent variable. The demographic variables like age, occupation, education, experience with bank, investment with a bank and annual income treated as dependent variable. Statistical tests applied in this research work are factor analysis, reliability analysis, Normed chi square test, analysis of variance (ANOVA), independent sample t test, Karl Pearson's correlation coefficient and multiple regressions. In this study the collected data was statistically analyzed by using Statistical Package for Social	plays major role. Most of the investors made their investment decision on the basis of reputation of the financial institution. In this research the researcher has made a genuine attempt to establish the relationship between corporate governance and corporate reputation. In this study it has been found that corporate governance has a direct link on corporate reputation. More clearly each dimension of corporate governance have different impact on corporate reputation. The factors like

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
				Sciences (SPSS) and Analysis of moment structure (AMOS).	transparency and fairness plays a significant role in corporate reputation in commercial banks operating in Chennai, Tamilnadu. As per this research these two variables contribute in creating good corporate governance.
Arun Kumar (2016)	Department of law, Maharshi Dayanand university rohtak-124001 Haryana (India)	ROLE OF SECURITIES AND EXCHANGE BOARD OF INDIA IN CORPORATE GOVERNANCE: PROBLEMS AND ISSUES	Main objectives of this study are to analyze the need for good corporate governance, critically analyze the role of Securities and exchange board of India in corporate governance, critically examine the Companies Act and other Indian Laws relating to	This research has been conducted in the field of law. Hence the methodological part is slightly different comparing with our commerce research genre. Here the researcher has adopted 'doctrine legal research'. It provides for systematic exposition of the rules governing a particular legal	During 1990s corporate governance in India was in a dismal situation. At that time there was no proper corporate governance framework. In 1999, in a defining moment in India's corporate-governance history, the Indian Parliament created

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
			corporate governance, To study the procedure required for effective corporate governance in India and To highlight the regulations for prevention and control of scams in India.	category, analyze the relationship between rules, explain areas of difficulty and, perhaps, predict future developments. Basically this study is descriptive in nature. As primary source the researcher has depended statutes, delegated legislations, case law, treaties etc. and secondary sources were books, journals, articles etc.	the Securities and Exchange Board of India ("SEBI") to 'protect the interests of investors in securities and to promote the development of and to regulate the securities market." In the years leading up to 2000, as Indian enterprises turned to the stock market for capital, it became important to ensure good corporate governance industry-wide. Clause 49 of 'listing agreements' by SEBI deals with the corporate governance. Now we have a very transparent and efficient corporate governing system,

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
					it is only because of SEBI's continuous effort. This study says that only well-nourished systems and practices of corporate governance will transform the industrial society to take India to the top position in the developed nations by 2020.
SIKIRAT BAKARE (2016)	CENTRIA UNIVERSITY OF APPLIED SCIENCES, KOKKOLA	THE ROLE OF MERGERS AND ACQUISITIONS IN CORPORATE GROWTH AND DEVELOPMENT, CASE: SKYPE BANK NIGERIA PLC.	Influence of mergers and acquisitions on corporate growth and performance	The research was focused on the personal department, administrative department and finance department of the branch of skype bank, Nigeria. The study used both primary as well as secondary source of data. The research instrument used for collecting primary data was self-administered	The research is based on the Skye bank in Nigeria. The Skye bank is formed by merging eko international bank, prudent bank, reliance bank, bond bank and cooperative bank. This research work not only focused on the problems that are experienced by the companies which is gone

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
				structured questionnaire. Books, publication, relevant document and journals, CBN publication and Annual Report of Banks were the secondary sources for this study. Random sampling method was adopted to obtain the relevant information regarding research work. The statistical instruments used for analyzing data were percentage and chi-square distribution.	through mergers and acquisition process but also the legal implications and regulations for control merging and acquisition process and the procedures to be followed during the merging process. This research work also expanded its scope on three different sectors of the economy such as banking, insurance and conglomerate sector. Study found that in the skype bank after merger it led to increase in turnover and profitability of the bank. As long as the need for corporate development and growth exist, business integration will continue as an

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
					ongoing process for strengthen the business.
E.D.W.G. LIPS (2016)	TILBURG UNIVERSITY, SCHOOL OF ECONOMICS AND MANAGEMENT	THE RELATIONSHIP BETWEEN CORPORATE GOVERNANCE AND MERGERS & ACQUISITIONS A CASE STUDY ON US BANK HOLDING COMPANIES "Before, During, and After the Global Financial Crisis"	Impact of M&A announcements on stock return, to analyze boards with greater oversight and measured by board independence, lead to better M&A financial performance.	In this study the time period set to collect data was 15 years. The researcher has deliberately chosen the huge time span to cover the before, during and after financial crisis. The dependent variable for this study is merging & acquisition financial performance. This financial performance is calculated on the basis of CARs on the shares of the acquiring firm. The data used for this study was collected from 'Thomson One Banker' (also called: TOB) database,	This research work focused on the three phases, such as before, during and after the global financial crisis of the bank holding companies (BHC) in united states of America. This study enumerates that boards with greater oversight will have a statistically significant positive impact on the M&A financial performance measured by CARs. Secondly, the block holders would influence managers, who fail to create shareholders value. Therefore, having large number of

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
				Board Ex database and Orbis database.	block holders in a firm leads to good corporate governance mechanism and it will also improve financial performance. This study found that board independency is the important tool to increase merging & acquisition financial performance. Researcher says that limited availability of data was the major hindrance faced during the study though the researcher has provided useful findings.
MAXIM SEVASTYANOV	ST. PETERSBURG UNIVERSITY GRADUATE	THE ROLE OF CORPORATE GOVERNANCE IN MERGERS AND ACQUISITIONS HOW	Objectives include to Evaluate the impact of specific pre-M&A board	This research has been conducted by analyzing three sets of variables.	This study mainly focused on how corporate governance

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
(2016)	SCHOOL OF MANAGEMENT	BOARD STRUCTURE AFFECTS M&A PERFORMANCE	characteristics of acquiring firms on M&A performance and to Evaluate the impact of board structure as an internal corporate governance mechanism on M&A performance.	Cumulative abnormal return has been considered as dependent variable, board size, board independence, CEO duality and board ownership were considered as the independent variables and finally firm size and method of payment were considered as control variables. Estimation window and event window model has been adopted. The regression analysis was used in order to identify the impact of corporate governance on the efficiency of M&A transactions.	mechanism prevailing in a particular corporate and its board structure influence merging and acquisition deal. This research found that board characteristics such as board size, board independence and CEO duality influence mostly on merging and acquisition performance. And board ownership does not have any impact on merger and acquisition performance. The results of current study have important managerial implications.
	Saurashtra University Rajkot	A COMPARATIVE STUDY ON CORPORATE GOVERNANCE PRACTICES	This study has four objectives. Primary objective is to	It is an empirical study. Random sampling method is	This study has been focused on corporate

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
JAGRUTI K. DHADUS (2015)		IN SELECTED PHARMACEUTICAL COMPANIES OF INDIA	review good corporate governance practices among the selected pharmaceutical companies. Secondly, to identify the process of the C.G. in Pharmaceutical sector of India. Thirdly, To determine the level of disclosure, the accuracy and timeline of the financial position, condition, and prospects, and other nonfinancial information of the selected Pharmaceutical Companies in India and finally, To develop Corporate Governance Disclosure Index on the Basis of	adopted. This study was mainly depended on corporate governance disclosure index (CGDI). Other tools used for this study to test hypothesis was t-test, ANOVA, F test, correlation matrix and Pearson's correlation	governance practices of selected pharmaceutical companies from BSE and NSE. The study analyzed financial disclosure, non-financial disclosure, board practice, corporate governance practice and transparency of the selected companies. It observed that financial disclosure of the companies is more than non-financial disclosure.

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
			financial and nonfinancial disclosure.		
Amitabha Ray (2015)	Department of Business Management, University of Calcutta	STUDY OF CORPORATE GOVERNANCE PRACTICES IN INDIA WITH EMPHASIS ON FAMILY RUN COMPANIES	Objectives include to Identify the determinants of CG, develop a CG Index and thereafter use it to understand whether CG is influenced by the ownership structure, capital structure and other firm characteristics, second, Provide an exploratory inquiry into the dimensions of CG and assess whether CG is useful in understanding corporate performance and hence firm value and finally Understand the association	This study was focused on identifying the relationship between corporate governance and family run businesses. In this research the researcher covers three aspects such as corporate governance and business structure, corporate governance and firm performance and corporate governance and dividend policy adopted by the firm. This study has been focused on the Indian corporate sector. For this research the researcher has samples 58 companies. It includes 31 family run companies and 27	The main objective of this study was to measure the level of compliance of CG with regulations in Indian listed companies. It is suggested that compliance with the strong CG principles and guidelines will lead to increased investor confidence. Although questions have been raised about the efficacy of both mandatory and voluntary forms of CG regulation, this research shows that compliance with such regulations has increased. The increase in the level

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
			between dividend policy and CG, ownership and capital structures of the firm, and to identify the various determinants of dividend policy.	nonfamily run companies. The study is descriptive in nature and used principal component analysis to identify the impact of corporate governance on firm performance and value. In order to identify the attributes multiple regression analysis was conducted.	of compliance has resulted in greater transparency and investor confidence. This is apparent form the corporate governance index (CGI) scores that we have computed for our sampled firms.
PANARI SANDEEP SAMBHAJI (2013)	University of Pune	A STUDY OF CORPORATE GOVERNANCE PRACTICES OF INDIAN BANKS WITH REFERENCE TO PRIVATE SECTOR BANKS		Both descriptive and analytical in nature. The scope of the sampling has been restricted to eight private sector banks. Mainly depended on secondary data. Simple mathematical and statistical tools have been used	This study made an attempt to discover corporate governance practices followed by Indian banks especially private banks. Most of the banks are following all the guidelines explained in the clause 49. It has found that proper implementation of corporate governance

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
					attributes can reduce banking frauds.
VANGALA HARISH SRIVATSAVA (2013)	University of Hyderabad	CORPORATE GOVERNANCE: A CASE STUDY OF AN INDIAN MULTI-DIVISIONAL COMPANY	Objectives of this study include explore the emerging issues in Corporate Governance, To study the trends regarding the reforms and recommendations done recently in Corporate Governance in India, To study the existing framework of Corporate Governance in India, To analyze the implementation of Corporate Governance code with respect to selected listed private banks in India. And finally To provide suggestions to	Both descriptive and exploratory in nature. Stratified random sampling strategy is used. Major focus is on a single case ITC Ltd. But attention is also given to various subunits. It mainly focusing on corporate governance policies and practices of ITC Ltd. primary data were collected through interview method.	The study noted that ITC Ltd adopted a three-tire governance structure. The role, responsibilities, and delegation of powers of each sector is clearly defined in the corporate governance policy of ITC. Overall, the ITC Ltd follows corporate governance policies in a positive way.

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
			improve Corporate Governance in banking		
SARABJEET KAUR GOGIA (2013)	The IIS University, Jaipur	CORPORATE GOVERNANCE IN PUBLIC AND PRIVATE SECTOR BANKS: A COMPARATIVE STUDY OF SBI AND ICICI BANK	Main objectives include assess the responsibilities of the Board of Directors in banks with respect to Corporate Governance, study whether introduction of Corporate Governance has curbed malpractices and frauds in bank and investigate the impact of implementation of Corporate Governance in improving the public trust and acceptability of a bank.	Descriptive and exploratory study. Focusing on the comparison of two banks hence it also an evaluative in nature. Both primary and secondary data included. Survey method, personal interview, observation methods have been used to collect primary data. Hypothesis was tested by using one way ANOVA, t' test, Likert scaling and chi square test.	Aim of this study was to make a comparison between corporate governance in public and private sector banks. As part of this study manager, employees and customers of both the banks have been taken. Employees in the public sector are less aware about the corporate governance practices and they are very hesitant to embrace new changes in the organization.
M. PREETHI	university of Mysore,	EVALUATION OF CORPORATE	The main objective of the study	Study is descriptive in nature. Based on	In India public sector banks

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
(2013)	Manasa Gangotri, Mysore	GOVERNANCE IN NATIONALISED BANKS IN INDIA	includes determine the CG disclosure level of selected nationalized banks, examine the relationship between CG disclosure and corporate performance and determine whether CG affects investment decision of shareholders.	both primary and secondary data. Corporate governance disclosure level is considered as 1ndependent variable, and indicators of bank performance were considered as dependent variable. To analyze the corporate governance disclosure level content analysis were adopted. In order to analyze the collected data statistical tools such as mean, standard deviation, coefficient of variation, descriptive statistics, t test and bivariate Pearson correlation coefficient have been used.	dominates the banking industry but at the same time there are rising concerns about the governance challenges of public sector banks. This study is trying to evaluate the current status of governance in public sector banks. From the shareholder's perspective it shows that high disclosure and stronger enforcement is required for better governance in the banks. From the bank's policy makers perspective, it says that corporate governance has the potential to enhance the efficiency of the bank. This study

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
					says that need to raise the standard of corporate governance and make the nationalized banks attractive for the investors.
KAVITHA D (2013)	Faculty of management sciences, Anna university, Chennai	A STUDY ON THE EFFECT OF CORPORATE GOVERNANCE MECHANISMS ON THE DISCRETIONARY DISCLOSURES OF INDIAN FIRMS	To study the discretionary disclosures of Indian firms, propose and validate the dimensions, board characteristics, ownership structure, audit committee, board functioning and firm characteristics related to CG that affect discretionary disclosures.	The study was focused on analyzing the effect of corporate governance mechanisms on the discretionary disclosures of Indian firms which is listed in the BSE stock exchange. The study covered a period of five years from 2006 to 2010.The sample frame comprised of non-financial firms listed in the Bombay stock exchange (BSE). Sample size for the study was 128 firms. The sample size was finalized on the basis of power	This research has examined the discretionary disclosure practices of selected non-financial firms listed in the BSE. This research aimed to satisfy two research questions: 1) what the extent of discretionary disclosure is made by the Indian firms after the corporate governance reforms, and 2) have the improved corporate governance practices impacted the extend of

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
				analysis. The researcher has used a self-constructed disclosure index to determine the extent of discretionary disclosure of firms. The researcher has mainly used secondary data for this study which was obtained from the annual report of the firms. A disclosure index was made to study the extent of discretionary disclosure made by the firm in various categories such as business environment, financial, human resources, strategic, social, governance and general disclosures.	discretionary disclosures. Discretionary disclosure level of sample firms was low. Hence it indicates that firms are reluctant to disclose their information apart from mandatory disclosures. The result indicates that ownership structure has stronger influence on the corporate governance mechanisms than other factors. The result says that effectiveness of corporate governance mechanisms can be improved by increasing the transparency and disclosure level of firms.

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
KHALED AHMED MOHAMMED AL-ALIMI (2013)	North Maharashtra university, Jalgaon	THE IMPACT OF THE IMPLEMENTATION OF THE CORPORATE GOVERNANCEVCONCEPT ON THE EXPECTATIONS GAP IN YEMAN "ANALYTICAL STUDYOF THE OPINIONS OF YEMANIS AUDITORS AND INVESTORS"	Major objectives include identify the impact of procedures to protect the right of shareholders, analyze the CG framework and the impact of the identification and distribution of responsibilities between different supervisory authorities. Identify the principle of disclosure and transparency.	The research is descriptive in nature and based on two types of data such as secondary and primary data. Primary data has been collected by a field survey questionnaire and secondary data collected from already published journals, research works etc. the target sample for this study was Yemenis auditors and investors. The total sample size was 173. The statistical tools used for this study was Cronbach's alpha coefficient, one sample T test, Pearson correlation coefficient etc.	The key word in this research is expectation gap. The expectation gap can be defined as "the substantial difference between the community's expectation of auditing process and the actual accomplishments of auditing". The expectation gap in auditing is one of the upcoming challenges in the auditing profession in recent years. The sufficient and clear legal responsibility of the auditor is a significant and necessary factor to enhance the community trust in auditing and subsequently eliminates the expectation gap.

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
					This research says that the independence and strength of the internal control system contribute to narrow the expectation gap in auditing.
R. Krishnan (2012)	Sri chandrashekarendra Saraswathi viswa maha Vidyalaya university	CORPORATE GOVERNANCE AND ITS IMPACT ON PERFORMAMNCE OF FIRMS IN IT INDUSTRY IN INDIA	Main objectives include to analyze recent trends in corporate governance, measure and analyze the inter - relationship of the impact of CG on corporate growth and enrichment.	It is empirical research. Cross section and time series data are pooled together in this study. Completely depended on secondary data such as annual reports to study the firm performance and corporate governance. Structural analysis, multiple regression analysis, ANOVA etc. have been conducted to analyze the collected data.	In this study by analyzing the variables like CEO duality, board independence, board size and ownership structure trying to understand the relationship between corporate governance and firm performance. It says that larger companies are enjoying more positive benefits of corporate governance than medium sized companies.

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
BEENA S. DAVE (2012)	Saurashtra University Rajkot	CORPORATE GOVERNANCE IN BANKING SECTOR	Main objectives include identify the relevance of CG in banking sector, to document the CG practices of public and private sector banks, evaluate the performance of various CG committees, understand shareholders interest and satisfaction with corporate governance requirements.	It is a secondary data-based study obtained from published annual reports of the bank. For the study both the five privates as well as five public sector banks have been chosen. Stratified sampling method has been used for this study. Independent sample t test, percentage analysis etc. have been used for analysis	In this study it was focused to explore the disclosure practices of corporate governance in banks. To study about the disclosure practices the researcher analyzed 25 parameters and result was only 20% parameters are disclosed fully and remaining are not disclosed or partially disclosed. It is very important responsibility to the board of directors, that to improve disclosure practices of banks. While comparing public and private sector banks regarding disclosure practices, it is found that private sector banks are less

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
					transparent in disclosure.
NEETI K. SANAN (2011)	Aligarh Muslim university, Aligarh (India)	FINANCIAL DISCLOSURES AND CORPORATE GOVERNANCE: A COMPARATIVE STUDY OF LARGE AND MEDIUM SIZED COMPANIES	To analyze the level of CG disclosure, To examine the impact of Clause 49 on the level of corporate governance disclosures of listed Indian companies and to highlight the difference in corporate governance disclosure levels of large and medium scale companies in pre and post reform period and To suggest ways and means of financial disclosure to improve the healthy working of organizations.	This study is mainly descriptive in nature. Descriptive study provides us elaborative information about a problem or situation. Size of the company, listing status, leverage, sales in foreign currency, nature of industry and profitability were considered as independent variables. Corporate governance disclosure score (CGDS) was taken as the dependent variable. This study has been used both the primary and secondary data. Hypotheses in the study have been tested by using univariate and	This research tries to examine the relationship between financial disclosure practices and corporate governance in the selected listed companies. By examining corporate governance disclosures over a period of eight financial years, the study documents evidence that it is possible that firms change their disclosure behavior over time. There is a huge variation in the quality of corporate governance adopted by each company. It's been found that financial sector

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
				multivariate statistical analysis.	companies have higher disclosure than that of non-financial sector. This is mainly because financial sector is more regulated than non-financial sector. Same as public sector companies have more disclosure practices than private sector companies.
AMITHA SEHGAL (2010)	SNDT WOMEN'S UNIVERSITY, MUMBAI	CORPORATE GOVERNANCE OF COMMERCIAL BANKS IN INDIA	To study the influence of board size, director's reputation, diligence of directors and internal risk management. In addition to this study and trace the history of CG in banking sector.	This study followed casual research design which attempts to establish a cause-and-effect relationship between corporate governance, bank valuation and risk taking. This research work is based on both secondary data sources obtained from banks annual reports and primary	The major findings of this study includes that the bank ownership which means public or private or foreign, has an influence on banks performance and risk management. This study argues that banks with smaller board size enjoy better valuations. Banks

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
				data collected through interviews with bankers and regulators. The main objective of this study was to analyze how ownership structure influence the impact of corporate governance practices on banks performance. The research has formulated and tested hypotheses. By using purposive and representative sampling methodology the researcher has selected 20 banks. Valuation measures like Tobin's Q, price to book value, return on asset, capital to risk asset ratio etc. were used to analyze depended on variables, for analyzing	with larger board size is less cohesive. This may lead to a poorer risk management. Busy directors (directors having multiple outside directorship) have a positive effect on banks credit delivery functions. Research says it is proved that firms that are able to attract directors with reputation enhance its reputational capital and increases shareholder value. But the study also cautions on over busy boards. The researcher says that over the period of the study there is a definite improvement in the corporate

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
				independent variables like risk management, functioning of the board etc. the researcher has depended various econometric tools.	governance standards, the level of transparency and disclosures of banks.
MARY JOHN (2009)	Goa University, Goa	CORPORATE GOVERNANCE IN SELECTED INDUSTRIES: AN EMPIRICAL ANALYSIS IN THE INDIAN CONTEXT	Objectives include investigate mandatory CG disclosures and analyze corporate governance and performance.	Empirical in nature. Sample companies which were listed in the Bombay stock exchange (BSE). Adopted nonprobability, deliberate sampling method. Correlation and multiple regression methods were adopted to test the hypothesis.	After analyzing all the possible companies in various sectors which is listed in BSE, it was found that companies need to take initiate to establish the disclosure practices beyond the basic norms so that they can achieve higher transparency and higher governance.
AMITA SHARMA (2006)	HNB Garhwal university, Srinagar (Garhwal)	A STUDY OF CORPORATE GOVERNANCE PRACTICES IN INDIAN FINANCIAL SECTOR	The main objective of this study is to make an analytical review about various codes of corporate	The study is descriptive and diagnostic in nature. Four segments of financial sector is used for the study,	The ultimate aim of introducing clause 49 by SEBI was to monitor and regulate corporate governance

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
			governance recommended by different committees, to evaluate sample organizations' compliance with good corporate governance by analyzing their Board Composition and Board Committees and to examine issues like corporate objectives, protection of minority shareholders, insider trading and postal ballot etc. from the viewpoint of corporate governance.	such as public sector banks, private sector banks, financial institutions and foreign banks. Since the study is descriptive in nature, therefore simple tools have been used to analyze the data. The data was compared with the set standard based on the clause. 49, guidelines of ICAI and ROSC.	practices of listed companies in India. The Narayan Murthy committee report shows that there is a progress in the corporate sector after the implementation of clause 49.
	University of Calcutta	CORPORATE GOVERNANCE IN INDIA	Main objectives include identify the	This study is explorative,	This study made an attempt to

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
SUBHASH CHANDRA DAS (2006)		AN EVALUATION	purpose of CG and examine the philosophy behind corporate governance and factors influencing good CG and To identify the areas where the further improvement of CG is needed,	conceptual, and empirical in nature. Secondary data-based study. Sample consist of companies which are listed in the BSE and NSE.	formulate standard code on corporate governance practices and disclosure norms on corporate social responsibility, business ethics and environmental issues. In order to gain trust from the public there must a transparent disclosure of social performance by companies. Companies should take environmental safety precautions.
MITABEN B. VORA (MAY-2005)	SAURASHTRA UNIVERSITY RAJKOT – 360 005 GUJARAT (INDIA)	A STUDY OF CORPORATE GOVERNANCE PRACTICES OF CORPORATE SECTOR IN INDIA	Major objectives consist of to document the corporate governance practices in various groups of industry, to examine the practice of the corporate governance for	In this empirical research the researcher tries to figure out the corporate governance practices of corporate sector in India. Total 50 companies have been covered for this study. These 50 companies include	In this study the researcher tried to analyze the corporate governance trends of different corporate prevailing in India. The researcher covered governance of banking sector to

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
			Board of Director, To study the transparency and related disclosure and To study shareholder's satisfaction and practice for their various claim.	Top IT companies, Top Pharma and Healthcare companies, Top Banking and financial sector companies, and Top FMCG Companies. For collecting samples stratified sampling method has been used. Corporate governance disclosure index has been developed by the researcher to analyze the disclosure practices of selected corporate. Researcher has used sophisticated tools to test the Hypothesis. Like ANOVA, 'f' test etc.	FMCG sector. Governance of banks is entirely different from other sectors because of its confidentiality nature.
	University of Madras	CORPORATE GOVERNANCE AND GROWTH - A STUDY OF	In order to fully comprehend the regulations that govern the Indian	The study was conducted by selecting 100 companies which	Out of 100 companies few companies are growing positively

AUTHOR	UNIVERSITY	THESIS	OBJECTIVES	METHEDOLOGY	SUMMARY
M. MANUNEETHI CHOLAN (2000)		MAJOR INDIAN COMPANIES	corporate sector, it is necessary to explore the evolution of corporate governance. Additionally, studying the internal systems of corporations is crucial for enhancing relationships with stakeholders. Finally, it is important to examine how the case company, as well as Indian businesses as a whole, fit into the current global discussion on corporate governance.	shares are actively traded in the BSE and NSE. secondary data was collected mainly from annual report, reserve bank of India reports, stock exchanges etc. standard deviation, correlation, multiple regression analysis are the tools which used to analyze the data.	because of the good corporate governance implementation. Companies which have good corporate governance generate economic value added; market values added and increase in the shareholders return. Out of the sample many of the companies are suffering with poor corporate governance.

2.3 Research Gap

After a thorough review of the existing literature, it has become clear that additional research is needed in various areas. Specifically, the current literature does not offer enough information on comparing pre-post mergers and acquisitions among public sector banks in India, based on the corporate governance and corporate performance. Additionally, there is a lack of literature on how these mergers and acquisition affect the concentration and competition structure of the Indian public banking sector.

After reviewing multiple studies, the researcher adopted the balanced scorecard method to evaluate the comprehensive corporate performance of the Indian public banking sector. It is discovered that the corporate governance index is the most effective method for determining disclosure and compliance with governance norms. Additionally, concentration ratios and the Herfindahl-Hirschman index were used to evaluate market concentration and competition structure.

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CHAPTER 3

THEORETICAL BACKGROUND

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3.1 EVOLUTION OF BANKING

Banks are as old as the written history of humankind. Primitive forms of today's banks existed in Rome, Babilonia, Greece, and Egypt about 4000 years ago. In the ancient days, the only duty of the 'bank' was to protect people's wealth. In ancient times, wealthy merchants and nobles feared that frequent wars and the collapse of empires would destroy their wealth. They were looking for a safe place to keep their valuables and money.

People realized that the places of worship were the best place to store wealth. In general, all shrines were heavily guarded by the militants. The credibility and influence of the clergy in the community-led the wealthy peoples to keep their possessions in the temples. Gradually the reliance on places of worship to keep valuables decreased. The reason was that the temples were looted when attacked by foreigners. In addition, due to social growth and commercial development, better financial institutions were needed.

The evolution of the world banking system can be traced back to ancient times, where the barter system was used as a means of exchange. In the course of time, as societies become more complex, a more sophisticated financial system becomes necessary. This led to the emergence of banks, which served as secure places to store valuable goods and offered loans to individuals and businesses.

The use of precious metal coins as currency was prevalent in the Middle Ages, and this led to the establishment of the first banks in Europe. These banks, known as "goldsmiths," accepted deposits of gold and silver, issued receipts for them, and eventually started issuing paper money. As a result of this, modern banking was born,

and by the end of the 18th century, banking had become an integral part of the economy in both Europe and North America and had become an integral part of the economy worldwide.

A fractional reserve banking system was introduced in the 19th century, which allowed banks to lend out more money than they had on deposit. This system stimulated economic growth by increasing the money supply and providing credit to businesses and individuals. In addition, it led to the establishment of central banks that regulate the money supply and ensure the financial system's stability.

The 20th century saw the advent of electronic banking, which revolutionized the way banking was done. Computers and the internet made it possible for customers to access their accounts, transfer money, and make payments online. As a result, banking became more convenient and accessible. This led to the emergence of online banking, which enabled customers to conduct transactions from the comfort of their homes or offices.

The widespread use of smartphones in the 21st century has led to the rise of mobile banking. Mobile banking allows customers to perform banking transactions such as depositing checks, transferring money, and paying bills using their mobile devices. This has made banking even more accessible and convenient, enabling customers to conduct transactions on the go.

The emergence of fintech companies and digital banks in recent years has disrupted the traditional banking system. These companies offer customers innovative and convenient banking services, often at lower costs than traditional banks. They have introduced new financial products, such as peer-to-peer lending and digital wallets, which have changed the way people save, invest, and manage their money.

In conclusion, the evolution of the world banking system has been driven by technological advancements, economic and political developments, and changing consumer preferences. Over time, the banking system has evolved to offer a wide range of financial products and services that are now easily accessible to individuals and businesses globally.

3.2 AN OVERVIEW OF THE INDIAN BANKING SECTOR

3.2.1 Historical background of Indian banking

1. Ancient and medieval period

India's banking system is believed to be as old as the Vedic period. We have got written pieces of evidence about deposits, loans, interest rates, and collateral from 'Manusmrithi,' an ancient Indian book. Banking in ancient India heavily relied on traditional practices and trusted relationships. Temples, wealthy individuals, and merchants acted as crucial financial intermediaries, providing lending and borrowing services. These temples, known as "mathas" or "tirthas," served as centers for financial transactions and played a vital role in managing and distributing wealth. Loans were given to farmers, traders, and artisans to support their economic activities. During the medieval period, indigenous banking practices contributed to the further development of banking in India. Private bankers and financiers, also called "shroffs" and "sahukars," offered credit to individuals and businesses, collected deposits, and facilitated remittance services. These moneylenders were integral members of their local communities and played a significant role in meeting the financial needs of the people.

Banking activities during this period were based on trust and personal relationships. The borrowers' reputation, credibility, and integrity played a vital role in obtaining credit. The interest rates charged by moneylenders varied based on factors such as the borrower's creditworthiness and the perceived risk of the transaction.

Although these banking practices were crucial in the ancient and medieval periods, they were relatively localized and limited in scale compared to modern banking systems. The advent of colonial rule and subsequent reforms in the banking sector brought significant changes in the structure and functioning of banks in India.

The ancient and medieval period banking practices in India laid the foundation for the evolution of the banking sector and shaped the financial ecosystem. These early practices emphasized the importance of trust, personal relationships, and community

support in banking activities, values that continue to influence the banking sector today.

2. Colonial period

The colonial period in India, particularly under British rule, witnessed significant developments in the banking sector. The establishment of modern banks and the introduction of new financial systems laid the foundation for the organized banking system that exists in India today. The advent of the modern banking system in India is related to foreign trade. The main functions of these banks were to exchange and convert coins for export and import. Hence these banks were called exchange banks. At the end of the 19th century, there were exchange banks in the cities such as Bombay, madras, and Kolkata. The situation that prevailed during the First World War marked the beginning of change across India. Many banks were set up in India following the exchange banks.

Private bankers were prominent bankers in the 19th century. They were able to lend money even to the needs of the country. In addition to that, there was a sound system of providing loans for both agricultural and commercial purposes. The arrival of the British East India Company marked the end of these practices. Banks that came to India along with the east India Company started a new banking system here.

As we said earlier, the modern banking system in India dates back to the 19th century. Europeans mainly invented it. The new entrants to the banking sector were mainly financial institutions known as 'Agency houses.' The 'Agency houses' received deposits from European officers who had served in India and other Indian landlords (Chapman, 1988). They also provided loans for commercial purposes.

In 1770 an agency house called Alexander & company completely entered the banking industry under the name 'The bank of Hindustan.' Following this, the agency house in Bengal started banking in India under the name 'The Bengal Bank' in 1784 and 'General Bank of India' in 1786. But none of these banks were capable of surviving in all economic environments.

In the colonial era three banks were established namely, the Bank of Bengal in 1806, the Bank of Bombay in 1840, and the Bank of Madras in 1843. These three banks were collectively called as presidency banks. These banks played a crucial role in facilitating trade, providing credit, and issuing banknotes, serving as key financial institutions. They catered mainly to the needs of European merchants and colonial administrations, operating under charters granted by the British crown.

The presidency banks were instrumental in the economic development of the country, providing banking services to facilitate international trade, supporting infrastructure projects like railways, and acting as a medium for remittance services. The issuance of banknotes by these banks streamlined currency circulation and facilitated economic transactions.

The colonial period marked a significant transition in the banking landscape of India. The establishment of modern banks and the introduction of a centralized banking system laid the foundation for the subsequent development and evolution of the Indian banking sector. Even today, the legacy of these institutions continues to shape the banking system in India.

3. Nationalization

In India, the nationalization of banks was a significant event that occurred in two phases, in 1969 and 1980. This involved transferring the majority ownership and control of major private banks to the government, with the aim of achieving greater social and economic development through a more inclusive and regulated banking system (Sathye, 2003). with the two rounds of nationalization, the government got control over about 91 per cent of the banking business (Dhameja, 2020). The rationale behind nationalization can be attributed to several factors, such as promoting financial inclusion, extending banking services to the unbanked and underprivileged sections of society, and directing banking resources towards priority sectors like agriculture, small-scale industries, and rural development. Banks were nationalized because they failed to provide banking services and financial assistance to rural and less privileged areas of the economy. A nationalized banking system was seen as a solution (Ketkar, 1992).

The government plans to achieve the goals of bank nationalization through two methods. Firstly, by expanding the banking network throughout the country with a focus on providing sufficient banking facilities in areas that were previously unbanked or underbanked. Secondly, by ensuring access to bank credit for all economic segments and regions of the country (Pandit, 1973).

The implications of nationalization were enormous. It expanded banking services in rural and semi-urban areas, bringing millions of people into the formal banking system. This expansion of branches improved access to banking services, encouraged savings, and facilitated financial transactions. Additionally, nationalized banks played a vital role in supporting the government's poverty alleviation and employment generation programs by providing credit to marginalized sections of society. Nationalization increased people’s confidence in banks (Singh, 2016).

The nationalization of the banking sector in India aimed to promote financial inclusion, direct credit to priority sectors, and strengthen banking regulations. It had a transformative impact on the banking landscape, expanding access to banking services and contributing to inclusive economic growth. The nationalized banks played a crucial role in supporting social objectives and acted as catalysts for development in various sectors of the economy.

4. Economic reforms and liberalization

In India, economic reforms and liberalization encompass a range of policy measures and initiatives that have been implemented to revamp and open up the country's economy. In the early 1990s, Narasimha Rao government embarked on a policy of liberalization, licensing a small number of private banks (Murali, 2013). These reforms, which were introduced in the early 1990s, marked a significant shift away from the previously closed and regulated economic system. The goal was to unlock India's growth potential, attract foreign investment, and integrate the country into the global economy. Economic reforms were necessary due to the challenges faced by the Indian economy, including low growth, fiscal imbalances, high inflation, and external payment difficulties. The driving force behind these reforms was the vision of fostering a more market-oriented, competitive, and investor-friendly environment.

In India, the objectives of financial liberalization were to improve the financial sector's performance and enhance financial institution efficiency. This includes commercial banks, stock exchanges, and other financial organizations. Despite this, the Indian financial system remains bank-centered, with the banking sector serving as a crucial resource mobilizer. “It remains the principal source of resources for many households, small and medium enterprises and also caters the large industries” (Das, 2010).

Based on the Indian experience, there are three significant consequences of financial liberalization. Firstly, there is an increased level of financial instability, as seen in the irrational boom of India's stock market. Secondly, a deflationary macroeconomic approach is taken, which negatively impacts public capital formation and the goal of promoting employment and reducing poverty. Finally, there is a credit squeeze for commodity-producing sectors and a reduction in credit delivery to rural India and small-scale industries (Chandrasekhar, 2006).

3.3 REGULATORY BODIES AND ACTS OF INDIAN BANKING SYSTEM

3.3.1 Reserve Bank of India

By April 1935, the Reserve Bank of India (RBI) had become the central bank of India and it is the apex regulatory authority of the Indian banking system. The establishment of the Reserve Bank of India (RBI) marked a crucial turning point in the history of Indian banking. The RBI was established as the country's central bank with the primary objective of regulating and overseeing the banking sector (Bansal, 2017). Additionally, the RBI was entrusted with the task of ensuring the stability of the Indian rupee and promoting the systematic growth of the financial system. The Reserve Bank of India has given the right to issue currency notes and the power to exchange foreign currency. Nationalization made RBI an authoritative body, and brought additional duties of regulating, controlling, and inspecting other banks (Singh, 2016).

The Reserve Bank of India is not only responsible for issuing and regulating currency but also for overseeing the country's credit and monetary policies. Its role extends to supervising and regulating commercial banks, including public-sector banks, private-

sector banks, and foreign banks operating within India. RBI has two major responsibilities. Its first goal is to maintain domestic price stability while also accommodating a flexible growth-inflation balance (Mohan, 2011). However, in recent times, the RBI has also had to prioritize ensuring financial stability (Gokarn, 2010).Throughout the years, the RBI has played an essential role in the development of the Indian banking system. It has implemented various measures aimed at modernizing and strengthening the banking sector, such as introducing prudential norms for banks, establishing a deposit insurance scheme, and implementing electronic payment systems. The Reserve Bank of India (RBI) and the government have a crucial role in promoting financial inclusion to boost economic growth. Ensuring financial inclusion is a crucial priority for the country's economic growth and societal advancement. It helps to bridge the gap between the rich and poor populations (Iqbal, 2017). This includes expanding banking services, installing new ATMs, and implementing various schemes throughout the country (Raman, 2012).

3.3.2 Banking Regulation Act 1949

In India, the Banking Regulation Act of 1949 was enacted as a direct response to the high number of bank collapses that occurred during the pre-independence era. These failures were primarily caused by inadequate management, fraudulent practices, and a lack of regulatory oversight.

In 1913, India experienced its first significant bank failure when the Tata Industrial Bank collapsed. Subsequently, other banks like the Central Bank of India and the Bank of Hindustan also failed, leading to significant financial losses for depositors and causing widespread distrust in the banking system. Unfortunately, this lack of confidence had adverse effects on the growth and progress of the Indian economy.

The Banking Regulation Act of 1949 marked a significant milestone in regulating and supervising the Indian banking sector. Its primary objective was to ensure that banks function in an orderly manner, promote financial stability, and safeguard the interests of depositors.

As per the Banking Regulation Act, the Reserve Bank of India (RBI) holds the authority to regulate and oversee the activities of banks in India. The RBI is accountable for issuing banking licenses, monitoring the operations of banks, and enforcing prudent norms that involve maintaining sufficient capital adequacy ratios and preventing deceitful practices.

The Banking Regulation Act also established the Banking Regulation Act Board, which was responsible for advising the RBI on matters related to banking regulation and supervision.

The Indian banking sector has greatly benefited from the implementation of the Banking Regulation Act, which has strengthened regulation and supervision. This has contributed significantly to the stability of the banking system. The Reserve Bank of India (RBI) has played a pivotal role in executing the provisions of the Act, taking various measures to ensure that banks adhere to prudent norms and uphold financial stability.

3.4 EVOLUTION OF THE STATE BANK OF INDIA

3.4.1 Presidency banks to state bank of India.

Bank of Bengal (1806), Bank of Bombay (1840), and Bank of Madras (1843) are three important banks in the history of Indian banking. These three banks were collectively known as the presidency banks. These banks functioned as quasi-government institutions. The capital investment of the local government and the board of directors were the specialties of these banks (Banerji, 1988). They also had the power to issue currency notes until 1862. In 1921 January 27^{th,} these three banks went through amalgamation and resulted in a single banking entity named the Imperial Bank of India. It performed all the functions which are expected to be performed by a commercial bank. The Imperial bank had control over all banking activities except the right to strike currency notes and exchange foreign currency. Prior to the RBI's establishment in 1935, the Imperial Bank of India functioned as India's central bank. It was a private-sector bank that primarily catered to the wealthy Indian elite, Indian princely states, and the British government. British and European shareholders

predominantly owned the Imperial Bank of India, and its services were relatively limited. The bank primarily focused its services on urban areas in India, with minimal representation in rural regions.

One of the main objectives of the Imperial Bank was to support the economic development of India. The bank played a crucial role in financing several infrastructure projects such as railways, ports, and irrigation systems. It also provided credit to the Indian industry, helping to promote industrialization in the country.

On July 1, 1955, the Imperial Bank of India was nationalized through the State Bank of India (Subsidiary Banks) Act, which was passed on May 13, 1955, by the Indian government (Das A. &., 2006). This act paved the way for the establishment of the State Bank of India (SBI), a statutory banking corporation headquartered in Mumbai (Gauba, 2012).

The Imperial Bank of India's nationalization played a crucial role in the growth of the Indian banking industry. The government's objective was to enhance the country's economic development by making banking services accessible to the masses. Private banks, which prevailed in the sector, were deemed insufficient in promoting economic growth and providing banking services to the general public, necessitating the government's intervention.

The nationalization of the Imperial Bank of India had multiple benefits for the Indian economy. Firstly, it provided banking services to the masses, especially to underprivileged sections of society in rural areas, as the SBI was required to establish branches there. The SBI played a significant role in promoting rural development by providing credit to the agricultural sector.

Secondly, nationalizing the Imperial Bank of India bolstered the banking sector in India. The SBI became the country's largest commercial bank and played a pivotal role in fostering economic development by extending credit to various sectors such as agriculture, small-scale industries, and exports.

Lastly, this move also contributed to promoting social welfare. The SBI was mandated to provide financial assistance to weaker sections of society, including small farmers, artisans, and small-scale entrepreneurs.

In conclusion, the nationalization of the Imperial Bank of India was a crucial step towards achieving financial inclusion, economic growth, and social welfare in India.

3.4.2 STATE BANK OF INDIA ACT 1955

On May 13, 1955, the Indian government passed the State Bank of India (Subsidiary Banks) Act, which gave the authorization for the nationalization of the Imperial Bank of India and the establishment of the State Bank of India (SBI). The Act officially took effect on July 1, 1955.

The primary aim of the Act was to establish a robust banking institution capable of fostering economic growth and offering banking facilities to the general public. It authorized the government to procure the shares of the Imperial Bank of India and transform it into the State Bank of India.

The Act also provided for the creation of seven subsidiary banks, which were previously owned by the Imperial Bank of India. These subsidiary banks were State Bank of Bikaner and Jaipur, State Bank of Hyderabad, State Bank of Indore, State Bank of Mysore, State Bank of Patiala, State Bank of Saurashtra, and State Bank of Travancore.

The subsidiary banks operated independently but were obligated to adhere to the policies and guidelines established by SBI. Additionally, SBI was responsible for offering financial and technical support to the subsidiary banks.

The nationalization of the Imperial Bank of India and the establishment of the SBI brought numerous advantages to the Indian economy. As the largest commercial bank in India, the SBI played a critical role in advancing economic growth by extending credit to various sectors including agriculture, small-scale industries, and exports.

The subsidiary banks played a vital role in promoting regional development by extending banking services to the underprivileged communities. They were mandated

to open branches in rural areas and grant credit to the agricultural sector.es in rural areas and provide credit to the agricultural sector.

To summarize, the enactment of the State Bank of India (Subsidiary Banks) Act was a major milestone in the Indian banking sector's nationalization. This legislation facilitated the establishment of a robust and influential banking institution that could drive economic growth and offer financial services to the masses. Additionally, the formation of subsidiary banks aided in promoting regional progress and extending banking services to disadvantaged communities. The SBI remains an essential player in the Indian banking industry and contributes significantly to the country's economic advancement.

3.5 CORPORTAE RESTRUCTURING – MEANING AND TYPES

a) Meaning

Corporate restructuring involves making significant changes to a company's business model, management team, or financial structure in order to tackle challenges and boost shareholder value (Yadav, 2019).Corporate restructuring is the process that involves the purposeful and significant changes implemented within a company's organizational structure, operational processes, or financial framework with the primary goal of improving its overall performance, efficiency, and profitability. These modifications encompass a wide range of adjustments across various aspects of the organization, including its structure, operations, and financial arrangements. The underlying objective is to establish alignment with strategic objectives, facilitate adaptability to prevailing market conditions, address financial challenges, and capitalize on opportunities for growth and expansion. Corporate restructuring has become one of the most important solutions for firms to enhance their survival in the most efficient and effective way in the recent past (Sumathi, 2019).

b) Types of corporate restructuring

1. Financial Restructuring:

- Debt Restructuring: Companies may negotiate or alter their debt commitments with lenders to relieve financial distress, enhance cash flow, or decrease interest payments.

- Equity Restructuring: This involves modifying the ownership structure of the company, such as issuing new shares, buying back existing shares, or executing stock splits.

2. Operational Restructuring:

- Business Process Reengineering: Companies reassess and redesign their operational processes to boost efficiency, remove redundancies, and decrease costs.

- Outsourcing: Companies transfer specific operations or functions to external service providers to streamline operations, lower costs, and concentrate on core competencies.

- Downsizing: Companies reduce their workforce or eliminate certain divisions or business units to save costs, augment productivity, or refocus their activities.

3. Strategic Restructuring:

- Mergers and Acquisitions: Companies merge with or acquire other companies to obtain market share, expand their product offerings, or achieve economies of scale.

- Divestitures: Companies sell off non-core or underperforming business units to concentrate on their core competencies or generate funds for strategic investments.

- Spin-offs: Companies form independent, standalone entities by separating a portion of their operations or business units. These new entities operate independently but may still be partially owned by the parent company.

4. Organizational Restructuring:

- Centralization/Decentralization: Companies may restructure their organizational hierarchy by consolidating decision-making authority at the top (centralization) or delegating decision-making power to lower levels (decentralization).
- Change in Reporting Structure: Companies may alter reporting lines and departmental structures to improve communication, coordination, and decision-making within the organization.
- Management Succession: Companies may undergo changes in top-level management positions, such as CEO succession or leadership transitions, to bring in fresh perspectives and drive organizational change.

5. Capital Restructuring:

- Recapitalization: Companies modify their capital structure by adjusting the mix of debt and equity financing to optimize their financial position, reduce financial risk, or improve financial flexibility.
- Stock Buybacks: Companies buy back their own shares from the market, reducing the number of outstanding shares and increasing the ownership stake of existing shareholders.
- Rights Issues: Companies offer existing shareholders the chance to purchase additional shares at a discounted price to raise capital and bolster the balance sheet.

3.5.1 Mergers and Acquisitions

Mergers and acquisitions (M&A) are strategic business activities that involve the consolidation of companies to create a larger entity or gain a competitive advantage in the market (Berger A. S., 2008). Mergers and Acquisitions(M&A) are critical operations by which companies implement their growth strategies (Schiavone, 2012). Over the course of decades, these transactions have played an important role in shaping industries, economies, and the business environment as a whole.

When two companies decide to merge, they combine their operations, assets, and resources to create a single entity. This decision is often motivated by the desire to achieve synergies, increase efficiency, broaden market reach, or gain access to new technologies or capabilities. In a merger, both companies come together as equals, contributing to the formation of the new organization.

Acquisitions, on the other hand, involve one company purchasing another company, thereby gaining control over its assets, operations, and management. When one company buys another, it is called an acquisition. During an acquisition, negotiation may not occur. In this process, Company A purchases Company B and becomes its sole owner. Company B may either be entirely integrated and cease to exist as an independent entity, or Company A may choose to maintain Company B in its original form before the acquisition (Wallace, 2003). Acquisitions can happen in a friendly manner, with the target company accepting the offer willingly. In contrast, acquisitions can also be hostile, where the acquiring company bypasses the target company's management and approaches shareholders directly. Acquisitions can have benefits such as market expansion, diversification, elimination of competitors, or acquisition of valuable intellectual property.

The M&A process has several stages. It starts with identifying potential targets or partners. Next, due diligence is conducted to assess the target company's financial, legal, operational, and strategic aspects. Lastly, valuation methods are used to determine the fair price of the target company, considering its assets, liabilities, growth potential, and market position (Wallace, 2003).

Mergers and acquisitions can be both beneficial and challenging. Issues like cultural differences, complex integration, overvaluation, and failure to achieve expected synergies can arise. Mergers and acquisitions (M&As) may result in too much market concentration, resulting in increased prices and negative impacts on consumer welfare (Carletti, 2015).

However, with meticulous planning, diligent execution, and clear communication, M&A transactions can be successful, enabling business growth, innovation, and market leadership. These strategic activities require comprehensive analysis,

thoughtful planning, and effective integration to maximize the benefits and overcome any obstacles.

3.5.3 Benefits of Mergers and Acquisition(M&A)

1. Increased Market Power:

Mergers and acquisitions can result in increased market power and competitiveness. By consolidating operations, companies can gain a larger market share, negotiate better terms with suppliers or customers, and strengthen their position in the industry.

2. Improved Efficiency and Productivity:

Combining operations and resources can lead to improved efficiency and productivity. Companies can eliminate duplicate functions, streamline processes, and benefit from economies of scale, resulting in lower costs and higher productivity levels.

3. Expanded Customer Base:

Mergers and acquisitions can provide access to a larger customer base or new customer segments. This allows companies to offer a broader range of products or services and cross-sell to existing customers, thereby increasing revenue opportunities.

4. Enhanced Innovation and Research and Development (R&D):

Mergers and acquisitions can foster innovation by combining R&D capabilities, knowledge, and expertise. This enables companies to accelerate technological advancements, develop new products or services, and stay ahead of industry trends.

5. Risk Mitigation and Resilience:

Diversification achieved through mergers and acquisitions can help mitigate risks associated with market volatility, economic downturns, or industry-specific challenges. Companies can spread risks and build resilience by operating across multiple markets or sectors.

6. Access to Resources and Expertise:

Mergers and acquisitions provide access to additional resources, such as financial capital, human capital, intellectual property, distribution networks, or operational expertise. This can strengthen a company's capabilities and competitiveness.

7. Strategic Positioning:

Mergers and acquisitions can strategically position companies for future growth and opportunities. By aligning with market trends, customer demands, or emerging technologies, companies can enhance their ability to adapt to changing market dynamics and capitalize on new business prospects.

It's important to note that the actual benefits and outcomes of mergers and acquisitions can vary depending on the specific circumstances, industry dynamics, the integration process, and effective post-merger management. Thorough planning, due diligence, and implementation are crucial to realizing the desired objectives and maximizing the potential benefits of such transactions.

3.5.4 Theories of Mergers and Acquisitions

1. Synergy theory

The synergy theory, also referred to as the synergy hypothesis, is a concept in M&A that proposes that when two or more companies merge, they can create value that exceeds the sum of their individual values. According to the theory, the merged entity can achieve synergistic effects that lead to increased profitability, improved market positioning, enhanced competitive advantage, and accelerated growth. According to synergy theory, mergers and acquisitions occur because they provide economic advantages by combining two entities (kyeyi-mensah, 2017).

The foundation of the synergy theory is based on the idea that the merged entity can capitalize on various synergies, which can be classified into different categories. Cost synergies involve reducing expenses through economies of scale, streamlining operations, or eliminating duplicated functions. Revenue synergies, on the other hand, result from an expanded customer base, cross-selling opportunities, or the ability to

offer a broader range of products and services. Finally, operational synergies involve optimizing processes, sharing resources, or leveraging expertise and capabilities. According to (Dutordoir, 2014), revealing synergy forecasts before mergers results in higher returns.

However, it's important to understand that achieving synergy is not always guaranteed in every M&A transaction. Integration challenges, cultural differences, conflicting objectives, and execution difficulties can hinder the realization of expected synergies. To ensure the desired outcomes, companies must be diligent in addressing these challenges and actively manage the integration process.

2. Market power theory

Market power theory, also known as the market dominance theory, is a concept in mergers and acquisitions (M&A) that suggests companies engage in these activities to increase their market power and gain a competitive advantage. According to this theory, the primary motive behind M&A is to achieve a dominant position in the market, reduce competition, and exert greater control over pricing, distribution channels, or market dynamics.

In practice, regulatory authorities often scrutinize M&A transactions to assess potential anti-competitive effects and ensure they comply with competition laws and regulations. The market power theory provides insight into the strategic considerations behind M&A activities, highlighting the pursuit of competitive advantage and market dominance as motivations for companies engaging in mergers and acquisitions.

3. Agency theory

Agency theory is a concept that helps explain the relationships and dynamics between principals (shareholders) and agents (managers) within a company. It has implications for mergers and acquisitions (M&A) as it examines how M&A activities can align the interests of shareholders and management.

According to agency theory, managers act as agents of shareholders and are entrusted with making decisions in the best interest of shareholders. However, there can be a misalignment of interests between shareholders and managers due to differing objectives and incentives. Managers may prioritize their own interests or act in ways that do not maximize shareholder value.

In the context of M&A, agency theory suggests that shareholders may pursue mergers and acquisitions as a means to improve corporate governance, enhance monitoring of management, and align the incentives of managers with shareholder value creation. M&A activities can be used to address agency problems, such as ineffective management, underperformance, or conflicts of interest. Shareholders may use M&A transactions as a mechanism to hold managers accountable, ensure better decision-making, and increase the likelihood of value creation. By acquiring or merging with other companies, shareholders can influence strategic decisions, change management teams, or restructure the organization to align with their objectives.

From a managerial perspective, agency theory recognizes that managers may engage in M&A activities to advance their own interests or pursue personal ambitions. Managers may seek to expand their power and influence, increase the size of the company under their control, or build a corporate empire. This aspect of agency theory highlights the role of managerial self-interest in shaping M&A decisions.

Overall, agency theory provides insights into the dynamics between shareholders and managers and how M&A activities can serve as mechanisms to address agency problems and align interests. It emphasizes the importance of effective corporate governance, monitoring mechanisms, and aligning incentives to ensure that managers act in the best interest of shareholders.

4. Resource based theory

Resource-based theory is a concept that focuses on the strategic advantages that arise from a firm's unique resources and capabilities. In the context of mergers and acquisitions (M&A), resource-based theory suggests that companies engage in M&A

activities to access or acquire valuable resources, capabilities, or strategic assets that are critical for their competitiveness and long-term success.

According to resource-based theory, a firm's competitive advantage is derived from its distinctive resources, which can include tangible assets (such as physical infrastructure or technology), intangible assets (such as intellectual property or brand reputation), and organizational capabilities (such as knowledge, skills, and processes).

Resource-based theory emphasizes the importance of resource heterogeneity and resource immobility. Heterogeneity suggests that resources and capabilities differ across firms, leading to variation in competitive advantages. Immobility refers to the difficulty of replicating or transferring resources, which can create a sustainable advantage for the acquiring firm. By leveraging the resources and capabilities of both the acquiring and target firms, companies can enhance their ability to create value, improve operational efficiencies, and achieve sustained competitive advantage in the marketplace.

5. Diversification theory

The concept of diversification theory, also known as portfolio theory, suggests that companies engage in mergers and acquisitions (M&A) to diversify their business activities and reduce risk. This theory is based on the idea that spreading investments across different industries or markets can help counterbalance the negative impact of adverse events in one sector with the positive performance of another.

Diversification theory aims to achieve a more balanced and resilient portfolio by combining different businesses or entering new markets. By diversifying their operations, companies aim to reduce their exposure to industry-specific risks, economic fluctuations, or changes in consumer preferences.

However, it is important to remember that diversification comes with risks. Merging companies from different industries or entering unfamiliar markets can present integration challenges, cultural differences, and increased complexity in managing diverse operations. Successful diversification requires careful planning, rigorous due

diligence, and effective execution to ensure that the benefits outweigh the associated risks.

6. Monopoly theory

The concept of monopoly theory examines the motivations and outcomes of mergers and acquisitions (M&A), with the aim of establishing market dominance. This theory suggests that companies engage in M&A activities to eliminate competition and gain control over a particular market or industry. The objective is to establish a monopoly or a dominant position, enabling the company to have greater control over pricing, minimize competition, and maximize profits.

Monopoly theory proposes that through mergers and acquisitions, companies can consolidate resources, eliminate rivals, and gain a significant market share. By reducing competition, companies can potentially manipulate market conditions to their advantage, dictate prices, and enjoy higher profitability.

However, pursuing a monopoly raises concerns about anti-competitive practices and consumer welfare. Regulators closely monitor M&A transactions to ensure compliance with competition laws and prevent harm to market dynamics. Antitrust regulations help promote fair competition and prevent monopolistic behavior that may lead to reduced choices, higher prices, and decreased innovation.

While the monopoly theory provides insight into the strategic considerations behind M&A transactions aimed at establishing market dominance, it is vital to maintain a balance between market power and healthy competition. The efficient functioning of markets relies on competition to drive innovation, improve quality, and provide consumers with a variety of choices.

In conclusion, the monopoly theory highlights the motivations and potential outcomes of mergers and acquisitions when companies aim to establish monopolistic or dominant positions. It emphasizes the need for effective regulation and oversight to maintain fair competition and protect consumer interests.

7. Financial theory

When it comes to mergers and acquisitions (M&A), the financial theory focuses on the financial considerations and impacts involved in these transactions. The goal is to understand how M&A activities can benefit shareholders and contribute to the overall financial success of the companies involved.

Valuation is a key component of financial theory in M&A. Companies may engage in M&A transactions to acquire undervalued assets or combine businesses to enhance shareholder value. To determine the fairness of the deal, financial analysis techniques, such as discounted cash flow models, are used to assess the potential value created.

Financing is crucial in M&A, as companies need to secure funds to complete the transaction. The financial theory explores various financing options, such as issuing new equity or debt, to analyze the optimal capital structure and minimize the cost of financing.

Synergies are another critical element in financial theory. Companies aim to achieve synergistic effects by combining their operations, resources, and capabilities. This can result in cost savings, increased revenues, or enhanced market positioning, all of which contribute to financial value creation.

The financial theory also evaluates post-merger financial performance and measures the success of M&A transactions. Metrics such as return on investment, earnings per share, and shareholder value are examined to assess the impact of the deal on the financial health and profitability of the company.

By utilizing financial analysis and strategic financial planning, the financial theory provides valuable insights into the financial motivations, implications, and potential value creation of M&A activities. This helps companies make informed decisions, optimize their financial structure, and enhance shareholder value through successful M&A transactions.

8. Empire building theory.

The empire building theory also known as managerial hubris theory. According to managerial hubris theory, some managers may engage in mergers and acquisitions (M&A) that are driven by personal ambition rather than rational economic considerations. This can occur when managers become overconfident in their abilities and pursue M&A activities to fulfil their desire for power and prestige. Unfortunately, this can lead to irrational decision-making, where managers underestimate the risks and challenges of M&A.

As a result, value-destroying M&A deals can occur, where managers prioritize their personal objectives over creating value for shareholders. This can lead to overpayments for acquisitions, cultural clashes, integration difficulties, and loss of shareholder value. In extreme cases, companies may face financial distress and may need to unwind the ill-conceived M&A deals.

To address this issue, corporate governance mechanisms such as independent board oversight and shareholder activism play a crucial role. Effective monitoring and accountability structures can help restrain managerial hubris, ensuring that M&A decisions are based on sound strategic and financial considerations rather than personal ego.

9. Raider theory

The takeover theory, commonly known as the Raider Theory or the market for corporate control theory, emphasizes the involvement of corporate raiders in merger and acquisition (M&A) activities. This theory suggests that these external entities or individuals play a vital role in driving these transactions.

As per the Raider Theory, corporate raiders are motivated by the opportunity to acquire undervalued or underperforming companies and restructure them to maximize shareholder value. They identify target companies with potential for improvement due to poor management, inefficient operations, or undervalued assets.

To gain control or influence over the target company's board of directors, raiders often acquire a significant stake through hostile takeovers or proxy fights. Their aim is to initiate changes such as replacing management, restructuring operations, or divesting non-core assets to improve the company's financial performance.

The Raider Theory suggests that the threat of being targeted by a corporate raider can act as a disciplinary mechanism for underperforming companies. It promotes efficient allocation of resources, encourages companies to maintain competitiveness, and drives management to focus on shareholder value creation.

However, critics of the Raider Theory argue that raiders may prioritize short-term financial gains at the expense of long-term investment and value creation, potentially impacting long-term strategic goals and corporate stability.

Overall, the Raider Theory emphasizes the role of external entities in initiating M&A transactions to restructure underperforming companies and unlock shareholder value. It highlights the importance of market discipline and the potential benefits of external interventions in driving corporate governance and improving overall corporate performance.

3.5.5 Laws and regulations related to mergers and acquisitions in India.

The Companies Act, 2013 and the Securities and Exchange Board of India (SEBI) regulations govern mergers and acquisitions (M&A) in India. Here are some key laws and regulations related to mergers and acquisitions in India:

1. Companies Act, 2013: The Companies Act provides an overview of the legal regulations surrounding mergers and acquisitions in India. It covers the procedures for schemes of amalgamation, compromise, or arrangement between companies, as well as the steps required to gain approval from shareholders, creditors, and regulatory bodies.

2. SEBI (Substantial Acquisition of Shares and Takeovers) Regulations, 2011: SEBI's regulations monitor the acquisition of shares, control, and takeover of listed

companies in India. Provide guidelines regarding disclosure requirements, shareholder protection measures etc.

3. Competition Act, 2002: The Competition Act has a clear objective - to promote fair competition and curb any actions that may impede it. Any mergers and acquisitions that could potentially harm competition come under the scrutiny of this law. To go ahead with such mergers and acquisitions, companies must meet certain criteria and secure the approval of the Competition Commission of India (CCI).

4. Reserve Bank of India (RBI) Regulations: As India's central bank, the RBI has its own regulations for governing mergers and acquisitions in the banking and financial sector. Banks and financial institutions must comply with RBI guidelines for mergers, acquisitions and amalgamations.

5. Income Tax Act, 1961: The Income Tax Act deals with provisions related to mergers and acquisitions taxation, including provisions for capital gains, tax exemptions, and the carry forward of losses.

6. Securities Contracts (Regulation) Act, 1956: The Securities Contracts Act regulates India's securities market. This act provides guidelines for share acquisition, takeover offers, and insider trading.

7. Foreign Exchange Management Act, 1999: The Foreign Exchange Management Act governs foreign direct investment (FDI) and cross-border transactions. It regulates and restricts mergers and acquisitions involving foreign entities.

3.6 Corporate governance

Corporate governance is a complex system of rules, practices, processes and protocols that guide and oversee a company's operations. Corporate governance seeks to strike a balance between the interests of multiple stakeholders, such as shareholders, management, customers, suppliers, regulators and the wider community. This framework serves as the foundation for the company's strategic direction, ethical standards, operational procedures, and risk management strategies. Its primary goal is to ensure that the company's actions align with the objectives of its stakeholders,

promote ethical behavior, and comply with legal obligations, thereby enhancing the overall organizational efficiency. "Effective internal control systems are crucial for modern organizations and corporate governance serves as the cornerstone for achieving this "(Menexiadis, 2021). The fundamental objective of corporate governance is to maintain a balance between the interests of different stakeholders, including individuals, corporations, and society, while preventing conflicts of interest and the abuse of corporate resources for personal gain. Although the approaches to corporate governance may vary across countries and organizations, the ultimate aim of achieving a sustainable equilibrium of interests remains the same. According to (Bebchuk, 2004) and (Stanwick, 2002), "there is a positive relationship between corporate governance and firm value. The importance of corporate governance was recognized years before".

A central feature of corporate governance is the Board of Directors which oversees management's activities, represents shareholder interests and guides the company's strategic direction. The board's independence is crucial in ensuring fairness and preventing misuse of resources or conflicts of interest. Shareholders, as owners of the company, have rights such as voting on significant issues and receiving information. These rights are important for their involvement in the company's affairs and to hold the management and board accountable.

Transparency and disclosure are also essential in corporate governance. Timely and accurate disclosure of financial performance, risks, and strategies is necessary for financial markets' proper functioning and stakeholders' trust. Ethical behavior and corporate responsibility are integral parts of good corporate governance and contribute to a company's reputation and social license to operate. Effective risk management processes identify, evaluate, and manage risks that could hinder a company's ability to achieve its goals. Properly implemented corporate governance supports a company's sustainability and success, creating long-term value for stakeholders and society as a whole.

3.6.1 Corporate Governance in India

Corporate governance in India is a multifaceted construct, governed by a blend of statutory mandates and corporate norms. Its evolution has been a dynamic process, balancing globally acknowledged principles with the unique characteristics of the Indian business landscape. The regulatory architecture of corporate governance in India stems from multiple sources, primarily the Ministry of Corporate Affairs (MCA) and the Securities and Exchange Board of India (SEBI). The Companies Act of 2013 and SEBI's Listing Obligations and Disclosure Requirements (LODR) Regulations of 2015 form the core of this regulatory fabric (SEBI, 2015).

India's corporate governance framework underwent significant changes with the introduction of the Companies Act 2013. The Act specifically focuses on the composition and responsibilities of the Board of Directors and mandates that all companies have a balanced board comprising independent directors and at least one-woman director. The Act reinforces the board's fiduciary duties, giving it the power to oversee management activities, guide the company strategically, and ensure that the interests of stakeholders are represented appropriately. Additionally, the Act provides extensive rights to minority shareholders, protecting them from possible majority tyranny and ensuring fair and equitable treatment for all shareholders. Corporate governance mechanisms are economic and legal institutions that can be altered through the political process -sometimes for the better (Shleifer, 1997).

SEBI's LODR regulations have considerably fortified India's corporate governance framework. Central to these regulations is the emphasis on rigorous disclosure norms, meticulous examination of related party dealings, and the accentuation on the importance of stakeholder committees. With the objective of maintaining transparency, these regulations mandate that companies present their investors and stakeholders with punctual, precise, and clear information regarding their fiscal health, operational achievements, and potential hazards. Additionally, the regulations are designed to curb conflicts of interest by diligently reviewing and green-lighting related-party engagements. To zero in on pivotal domains, various committees such

as the Audit Committee, Nomination and Remuneration Committee, Stakeholder Relationship Committee, and Risk Management Committee have been instituted.

The Companies Act of 2013 introduces a distinctive aspect of Indian corporate governance through mandated Corporate Social Responsibility (CSR) expenditures. Companies that meet specific benchmarks in terms of net worth, turnover, or net profit are obligated to dedicate a minimum of 2% of their average net profits from the preceding three years to CSR initiatives. This clause fosters a sense of corporate stewardship, nudging businesses to champion societal and ecological well-being alongside their pursuit of commercial expansion. "It is crucial to understand that implementing specific corporate governance mechanisms can lead to supporting sustainability practices" (Hussain, 2016).

3.6.2 Corporate Governance in Indian banking sector

Corporate governance in the Indian banking sector is a comprehensive structure designed to meet the unique needs and challenges of the banking industry. This structure is based on regulatory frameworks established by various bodies such as the Reserve Bank of India (RBI), Securities and Exchange Board of India (SEBI), Companies Act 2013, Banking Regulation Act 1949 and Basel committee on banking supervision. The Basel committee on banking supervision has improved the governance mechanism in banks (de Andres, 2008). These regulations work together to ensure that the banking sector is managed in a manner that promotes sustainable growth, mitigates risks, and develops trust with all stakeholders.

The government of India primarily owns Public Sector Banks (PSBs), which follow distinctive corporate governance standards. The government's influence is evident in board composition (Pant, 2019), decision-making, and operational guidelines. The Banks Board Bureau is an independent entity that recommends top management appointments in PSBs. Additionally, PSBs must comply with government-directed social commitments, such as implementing particular schemes and providing banking services to underserved regions.

Public Sector Banks (PSBs) in India are governed by a dual set of regulations due to their unique status (Sarkar, 2016). They are governed by the Reserve Bank of India (RBI) due to their role as commercial banks, and by the government as their majority shareholder.

Many public sector banks (PSBs) are publicly traded on stock exchanges, and therefore must comply with the Securities and Exchange Board of India's (SEBI) Listing Obligations and Disclosure Requirements (LODR) Regulations of 2015. These regulations establish a comprehensive set of principles, including transparency, disclosure of information, strong governance of boards and committees, and safeguarding shareholder rights.

It is important to recognize that the corporate governance of Public Sector Banks (PSBs) differs from that of other public companies. The corporate governance mechanism is much more crucial in banking sector (Dhar, 2015). This is due to the substantial government ownership involved, which means that PSBs must comply with additional regulations and guidelines set by both the government and RBI. In some cases, these regulations may take precedence over those set by SEBI. For example, the appointment of directors in PSBs is more heavily influenced by the government, through the Banks Board Bureau, than in other public companies. While PSBs in India do follow SEBI's regulations on corporate governance to a significant extent, their governance structure is also influenced by additional rules and guidelines set by the government and RBI due to their status as government-owned entities.

In India, private sector banks have more operational autonomy compared to their public counterparts (Heffman, 2009). Companies that follow international best practices in corporate governance have greater independence in making strategic decisions as shareholders appoint top-level management and board members. In addition, being listed entities, they are required to comply with SEBI's Listing Obligations and Disclosure Requirements (LODR) Regulations, 2015, which enforce high standards of transparency and disclosure.

For foreign banks operating in India, the home country's governance norms apply, in addition to complying with Indian regulations.

3.6.3 Committees of corporate governance in India

There have been several committees in India that have shaped corporate governance frameworks over the years. Here are some significant corporate governance committees in India.

1.kumar Mangalam Birla committee (2000): In 1999, the Securities and Exchange Board of India (SEBI) established the Kumar Mangalam Birla Committee, chaired by industry stalwart and chairman of the Aditya Birla Group, Kumar Mangalam Birla. The committee aimed to enhance and uphold good corporate governance standards in India. It was the first comprehensive effort to introduce formal corporate governance norms to Indian companies listed on stock exchanges (Padhi, 2019).

The Birla Committee suggested that companies should have a structure consisting of shareholders and a board of directors. The board should have a balanced mix of executive and non-executive directors. The committee also recommended the establishment of a qualified and independent audit committee, improved financial disclosures, clear roles and responsibilities for independent directors, and a system for board review and management. The committee emphasized the importance of shareholder rights and suggested ways to increase transparency in company operations. These recommendations were later included in Clause 49 of the Listing Agreement for Indian stock exchanges, which companies must comply with to be listed. The Birla Committee also recommended a dual structure for the governance of companies.

2.Narayana Murthy Committee (2003): In 2003, the Securities and Exchange Board of India (SEBI) established the Narayana Murthy Committee. The committee, headed by N.R. Narayana Murthy, co-founder of Infosys, a prominent global IT company based in India, aimed to assess the effectiveness of current corporate governance practices and provide recommendations to enhance them. Its objective was to promote transparency and improve the credibility of financial disclosure processes in Indian corporations (Marisetty, 2011).

The committee's focus was on promoting transparency and disclosure practices within companies. Their recommendations included disclosing important financial ratios, risk management measures, and any changes in business strategy to shareholders. They also advised establishing clear roles and responsibilities for corporate board members and implementing a whistleblower policy to encourage reporting of fraud or unethical behavior by employees. The importance of CEOs and CFOs certifying financial statements and the role of audit committees in the company's governance structure were also emphasized. These recommendations were instrumental in encouraging Indian corporations to adopt more ethical and transparent business practices.

3.Naresh Chandra Committee: The Naresh Chandra Committee was established by the Government of India in 2002 to examine various aspects of corporate governance, particularly relating to auditor-company relationships and the role of independent directors. The committee was headed by Naresh Chandra, a former Indian bureaucrat and diplomat who had served in various significant capacities, including Cabinet Secretary and Indian Ambassador to the US. The objective was to suggest improvements in corporate audit and governance procedures in response to the changing dynamics of the business environment (Kumar, 2010).

The Naresh Chandra Committee recommended that audit partners, rather than auditing firms, should be rotated every five years, and that there should be a mandatory cooling-off period before an audit firm could be reappointed. It proposed that the remuneration of auditors should be decided by the audit committee, not the management. The committee emphasized that only certain types of non-audit services could be performed by an audit firm for its clients, to avoid conflicts of interest. In addition, it recommended that there should be at least one-third of the board as independent directors for all listed companies. The report provided by the Naresh Chandra Committee was comprehensive and progressive, and its recommendations played a crucial role in improving the standards of corporate governance in India.

4.J.J. Irani Committee: In 2004, the Government of India established the J.J. Irani Committee, led by Dr. Jamshed J. Irani, who was the Director of Tata Sons at the time.

The purpose of this committee was to provide expert guidance to the government regarding the new Company Law, which was a challenging task due to the constantly evolving economic environment. The Committee was responsible for reviewing the existing Company Law from 1956 and recommending revisions that would align with the needs of a dynamic economy and international best practices.

The Irani Committee presented various recommendations to simplify and streamline the law by adopting a principle-based legislative approach instead of a rule-based approach. They suggested categorizing companies based on their size and scale of operations to determine the applicability of governance norms, which is a significant shift from the previous method based on the company's type (public or private). Other suggestions included proportional representation for small shareholders, simplifying the procedures for mergers and acquisitions, and enhancing disclosure norms (Samanta, 2009). The J.J. Irani Committee's recommendations played a crucial role in shaping the Companies Act of 2013.

5.Adi Godrej Committee (2012): In 2012, the Confederation of Indian Industry (CII) established the Adi Godrej Committee, led by Indian industrialist Adi Godrej, who was then the Chairman of the Godrej Group. The main aim of the committee was to create a voluntary code for corporate governance that could be implemented by Indian companies. This was intended to improve upon the current legal structure and set higher standards of corporate governance consistent with global best practices.

The Adi Godrej Committee made several recommendations on corporate governance, including mandatory training for independent directors, separating the CEO and chairman positions, and having at least one female director on the board. The committee also suggested linking non-executive directors' remuneration to board performance evaluation, formulating a risk management strategy, and creating a succession plan for board and senior management appointments. These voluntary guidelines have greatly improved India's corporate governance framework, and many of them have been adopted in legal and regulatory reforms since.

6.Uday Kotak Committee (2017): The Uday Kotak Committee was set up by the Securities and Exchange Board of India (SEBI) in 2017 to improve the standards of

corporate governance of listed companies in India. The committee was led by Uday Kotak, the founder and managing director of Kotak Mahindra Bank, one of India's leading private sector banks. The objective of the committee was to make recommendations to SEBI on issues pertaining to corporate governance, with the aim of enhancing the effectiveness, transparency, and integrity of the corporate governance system in India.

The committee came out with a comprehensive set of recommendations, some of which were groundbreaking. It recommended the separation of the roles of the chairman and the managing director or CEO for a certain class of companies, arguing that this would provide a better balance of power (P. K., 2021). It also recommended increasing the number of independent directors on boards, enhancing the role and responsibilities of audit committees, and improving disclosure and transparency in corporate governance practices. Other key recommendations included the use of technology for improving investor participation in corporate governance, the introduction of 'information rights' for certain classes of shareholders and improving gender diversity on corporate boards. The Uday Kotak Committee's recommendations have had a profound impact on the evolution of corporate governance norms in India, and many of them have been adopted by SEBI in subsequent regulatory changes.

3.7 Listing Obligations and Disclosure Requirements (LODR)

The SEBI (Listing Obligations and Disclosure Requirements) Regulations, 2015, referred to as the LODR Regulations, were introduced by the Securities and Exchange Board of India (SEBI) to improve transparency and strengthen the governance of India's listed firms. For Indian firms listed on the stock exchange before this, Clause 49 of the Listing Agreement primarily governed the corporate governance standards, focusing on topics like board composition, audit committees, and mandated disclosures. These norms, though, had some drawbacks.

The LODR regulations, which went into effect on 1st April 2016, are a comprehensive and legally binding set of guidelines aimed at consolidating and simplifying prior listing agreements, with the goal of establishing consistent listing standards across market segments.

Listed entities are required to follow the LODR regulations, which have strict disclosure requirements. They must disclose material information such as financial results, shareholding patterns, corporate governance reports, and details of events that could impact their operations. This transparency allows stakeholders, especially investors, to make informed decisions based on accurate and timely information.

The LODR regulations provide strong corporate governance standards for companies that are listed. These standards cover various aspects such as the board of directors' composition and duties, the formation of important committees, and the responsibilities of independent directors. The regulations also ensure that key management personnel uphold their fiduciary duties, acting in the best interest of all stakeholders. This helps to improve the efficiency and honesty of the corporate structure while also increasing investor confidence.

It is essential to adhere to the LODR regulations to avoid severe consequences. Violations can result in significant penalties, including monetary fines, trading suspension, and even delisting of securities. These penalties serve as a reminder of the importance of compliance and discourage further violations. SEBI has implemented these strict regulations and penalties to protect the interests of investors and uphold the credibility of the securities market in India. Therefore, the LODR regulations play a crucial role in regulating the Indian securities market.

CHAPTER 4

MARKET CONCENTRATION AND COMPETITION OF THE PUBLIC SECTOR BANKS IN INDIA

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4.1 Introduction

This chapter gives a detailed description of the impact of state bank of India's (SBI) merger on the Market Concentration and competition in the public sector banks in India. The SBI mega-merger was a milestone in the history of the Indian banking sector. The main reason behind the merger was to create a global banking giant. At the same time, there are some concerns regarding SBI's merger with its associates. How is this merger going to affect the balance of Market Concentration and competition in the Indian banking sector.

Market Concentration refers to the degree of competition in a given market. When a merger or acquisition (M&A) takes place, two previously independent firms become one. As a result, the degree of Market Concentration will change, and it led to changes in the level of market competition. This means that where customers previously had at least two firms to choose from, they now only have one. This naturally reduces competition and increases market concentration. Bikker and Haaf (Bikker, 2002) provide a comprehensive literature survey on the methodologies used in this area.

In this section the level of concentration and degree of competition in the market is measured by using concentration indicators k bank concentration (CRk) and Herfindahl-Hirschman's Index (HHI).

4.1.1 Concentration Ratio (CR)

A Concentration Ratio is a crucial metric in economics, offering a glimpse into Market Concentration and the level of competitiveness within a particular sector. Typically, it captures the combined market share of the leading 'n' companies in a sector. In this analysis we have taken the top three, five and eight public sector banks in India based on the market share of assets, deposit and loans.

The Concentration Ratio is defined as:

$$CRk = \sum_{i=1}^{k} msi$$

Where, $MSi = \frac{\text{Market share of the i}^{\text{th}}\text{ firm}}{\text{Total market share of the industry}}$

Where ***CR*** is the concentration ratio, ***k*** number of largest banks, ***MS*** is the market share of ***i***-th bank. ***MSi*** has to be arranged in descending order.

4.1.2 Herfindahl-Hirschman's Index (HHI)

The Herfindahl-Hirschman Index (HHI) is a widely used measure of market concentration, and by extension, an indicator of the level of competition in a market. It's calculated by squaring the market share of each firm competing in the market and then summing the resulting numbers. The HHI value ranges from zero to 10,000. HHI equals 10,000, indicating a monopoly market situation. When the HHI value is less than 1,500, it represents an industry with low Market Concentration and a competitive marketplace. An HHI value between 1,500 and 2,500 represents moderate concentration, and HHI values above 2,500 indicate a highly concentrated industry.

HHI is the sum of the squares of the market share and is defined as:

$$HHI = \sum_{i=0}^{n} MSi^2$$

Where ***MS^2*** is the square of market share of the **i-**th banks in the market and **n** the total number of banks.

$$MS^2 = \frac{\text{Squares of the market share of the i}^{\text{th}}\text{ firm}}{\text{Squares of market share of the industry}} \times 100$$

4.2 Degree of Market Concentration in Indian public sector banks during pre-merger period (2014 to 2017).

The following tables show the degree of Market Concentration of the public banking sector during the pre-merger period from 2014-2017 based on the market share percentage of Assets, Deposits, and Loans.

Table 4.1

Market share percentage of the assets, deposits, and loans of the public sector banks in India in the year 2014

No	Banks	Assets % in market share	Deposit % in market share	Loans % in market share
1	State Bank of India	22.50	21.16	23.72
2	Bank of Baroda	8.28	8.63	7.78
3	Bank of India	7.19	7.24	7.27
4	Punjab National Bank	6.91	6.85	6.85
5	Canara Bank	6.17	6.39	5.90
6	Union Bank of India	4.44	4.52	4.49
7	IDBI Bank Limited	4.13	3.64	3.48
8	Central Bank of India	3.63	3.58	3.88
9	Indian Overseas Bank	3.45	3.46	3.45
10	Syndicate Bank	3.16	3.22	3.41
11	UCO Bank	3.00	3.03	2.93
12	Corporation Bank	2.79	2.94	2.73
13	Allahabad Bank	2.77	2.94	2.69
14	Oriental Bank of Commerce	2.76	2.90	2.71
15	Indian Bank	2.35	2.46	2.40
16	Andhra Bank	2.10	2.15	2.11
17	State Bank of Hyderabad	1.78	1.89	1.60
18	Vijaya Bank	1.72	1.81	1.88
19	Bank of Maharashtra	1.71	1.77	1.74
20	United Bank of India	1.57	1.69	1.29
21	Dena Bank	1.57	1.67	1.52
22	State Bank of Patiala	1.43	1.36	1.49

No	Banks	Assets % in market share	Deposit % in market share	Loans % in market share
23	State Bank of Travancore	1.32	1.36	1.36
24	Punjab and Sind Bank	1.19	1.29	1.12
25	State Bank of Bikaner & Jaipur	1.14	1.12	1.26
26	State Bank of Mysore	0.93	0.93	0.97
27	Bharatiya Mahila Bank Ltd.	0.01	0.00	0.00
	Total	100	100	100

Source: Author's calculation

The above table shows the details of all public sector banks in India and its market share contribution towards assets, deposits and loans in the year 2014. In 2013 there were only 26 banks but in 2014 Bhartiya Mahila bank Ltd came to the banking industry and increased the number of banks to 27.

Table 4.2

Three-bank Concentration Ratio (CR3) of the public sector banks in the year 2014.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	1792748	22.49	1394409	21.16	1209829	23.71
Bank of Baroda	659504.5	8.27	568894.4	8.63	397005.8	7.78
Bank of India	573190.2	7.19	476974.1	7.23	370733.5	7.26
CR3	3025443	37.96	2440277	37.03	1977568	38.76

Source: Author's calculation.

The above table shows the three-bank Concentration Ratio (CR3) of the public sector banks in the year 2014. Same as previous year, in 2014 state bank of India and bank of Baroda has attained first and second position on market share of assets, deposits and loans. Unlike previous year, in 2014 bank of Baroda has upgraded its position to third place by attaining 7.19 % on assets 7.235 on deposits and 7.26% on loans. By capturing 22.49% on total assets 21.16 % on total deposits and 23.71 % on loans, state bank of India has attained first position. The three-bank Concentration Ratio for assets, deposits and loans are 37.96%,37.03% and 38.76% respectively. CR3 indicates

that there is a very low concentration and perfect competition in the public banking industry in the year 2014.

Table 4.3

Five-bank Concentration Ratio (CR5) of the public sector banks in the year 2014.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	1792748.29	22.49	1394408.5	21.16	1209828.7	23.71
Bank of Baroda	659504.53	8.27	568894.39	8.63	397005.81	7.78
Bank of India	573190.2	7.19	476974.05	7.23	370733.54	7.26
Punjab National Bank	550419.92	6.90	451396.75	6.85	349269.12	6.84
Canara Bank	491921.85	6.17	420722.82	6.38	301067.48	5.90
CR5	4067785	51.04	3312397	50.27	2627905	51.51

Source: Author's calculation.

The above table shows the Five bank Concentration Ratio (CR5) of the top five public sector banks in India. Fifth position attained by Canara bank by capturing 6.17% of total assets, 6.38% of capital and 5.90% of loans. From the table, it is clear that the Market Concentration of top five public sector banks (CR5) based on asset, deposits and loans are 51.50%, 50.27% and 51.51% respectively. So, in 2014 the concentration ratios shows that there was lower Market Concentration in the industry with perfect competition moving towards oligopoly market situation.

Table 4.4

Market share percentage of the assets, deposits, and loans of the public sector banks in India in the year 2015.

No	Banks	Assets % in market share	Deposit % in market share	Loans % in market share
1	State Bank of India	23.60	21.92	23.74
2	Bank of Baroda	8.24	8.58	7.82
3	Bank of India	7.13	7.39	7.34
4	Punjab National Bank	6.95	6.97	6.95
5	Canara Bank	6.31	6.59	6.03

No	Banks	Assets % in market share	Deposit % in market share	Loans % in market share
6	Union Bank of India	4.40	4.40	4.67
7	IDBI Bank Limited	4.10	3.61	3.81
8	Central Bank of India	3.59	3.55	3.44
9	Syndicate Bank	3.49	3.55	3.70
10	Indian Overseas Bank	3.29	3.42	3.14
11	UCO Bank	2.83	2.98	2.69
12	Oriental Bank of Commerce	2.66	2.84	2.65
13	Allahabad Bank	2.62	2.69	2.74
14	Corporation Bank	2.60	2.77	2.65
15	Indian Bank	2.22	2.35	2.30
16	Andhra Bank	2.13	2.15	2.30
17	State Bank of Hyderabad	1.78	1.81	1.92
18	Bank of Maharashtra	1.68	1.70	1.80
19	Vijaya Bank	1.64	1.76	1.58
20	Dena Bank	1.50	1.61	1.44
21	United Bank of India	1.42	1.51	1.22
22	State Bank of Patiala	1.34	1.27	1.44
23	State Bank of Travancore	1.22	1.27	1.25
24	State Bank of Bikaner & Jaipur	1.18	1.17	1.27
25	Punjab and Sind Bank	1.13	1.21	1.17
26	State Bank of Mysore	0.92	0.92	0.95
27	Bharatiya Mahila Bank Ltd.	0.02	0.01	0.01
	Public Sector Banks	100	100	100

Source: Author's calculation

Table shows the market share contribution of the public sector banks in India in the year 2015. There is 27 public sector banks. While looking into the market share it is clear that state bank of India dominates the industry and the Bhartiya Mahila bank attained the last position.

Table 4.5

Three-bank Concentration Ratio (CR3) of the public sector banks in the year 2015.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr)	Share percentage in deposits	Loans (in Cr)	Share percentage in loans
State bank of India	2048080	23.59	1576793	21.91	1300026	23.73
Bank of Baroda	714988.6	8.23	617559.5	8.58	428065.1	7.81
Bank of India	618697.8	7.12	531906.6	7.393	402025.6	7.34
CR3	3381766	38.96	2726259	37.89	2130117	38.89

Source: Author's calculation.

From the table it is clear that state bank of India has attained first position by capturing 23.59% on assets 21.91% on deposits and 23.73% on loans. The three-bank Concentration Ratio (CR3) of public sector banks in India in the year 2015 based on the indicators assets, deposits and loans are 38.96%, 37.89% and 38.89% respectively. From the table it is clearly shows that low level of concentration and perfect competition in the industry.

Table 4.6

Five-bank Concentration Ratio (CR5) of the public sector banks in the year 2015.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	2048079.8	23.59	1576793.3	21.91	1300026.4	23.73
Bank of Baroda	714988.55	8.23	617559.52	8.58	428065.14	7.81
Bank of India	618697.76	7.12	531906.63	7.39	402025.55	7.34
Punjab National Bank	603333.6	6.95	501378.64	6.96	380534.41	6.94
Canara Bank	548000.56	6.31	473840.1	6.58	330035.51	6.02
CR5	4533100	52.23	3701478	51.45	2840687	51.87

Source: Author's calculation.

Table shows the five-bank Concentration Ratio (CR5) of public sector banks in India in the year 2015. Canara bank attained the fifth position by capturing 6.31 % on assets 6.58% on deposits and 6.02% on loans. Five bank Concentration Ratio (CR5) of three indicators assets, deposits and loans are 52.23%, 51.45% and 51.87% respectively. The concentration ratios indicates that there is a low concentration in the Indian public banking sector in the year 2015 with perfect market condition moving towards oligopoly market condition.

Table 4.7

Market share percentage of the assets, deposits, and loans of the public sector banks in India in the year 2016.

No	Banks	Assets % in market share	Deposit % in market share	Loans % in market share
1	State Bank of India	25.72	23.12	26.17
2	Bank of Baroda	7.32	7.67	6.86
3	Punjab National Bank	7.28	7.39	7.37
4	Bank of India	6.65	6.85	6.42
5	Canara Bank	6.03	6.41	5.81
6	Union Bank of India	4.41	4.58	4.78
7	IDBI Bank Limited	4.09	3.55	3.86
8	Syndicate Bank	3.36	3.50	3.60
9	Central Bank of India	3.33	3.56	3.22
10	Indian Overseas Bank	2.99	3.00	2.88
11	UCO Bank	2.67	2.77	2.25
12	Allahabad Bank	2.62	2.68	2.72
13	Oriental Bank of Commerce	2.62	2.79	2.66
14	Corporation Bank	2.56	2.74	2.51
15	Indian Bank	2.22	2.38	2.31
16	Andhra Bank	2.18	2.33	2.34
17	State Bank of Hyderabad	1.80	1.83	1.99
18	Bank of Maharashtra	1.76	1.86	1.92
19	Vijaya Bank	1.59	1.68	1.59

No	Banks	Assets % in market share	Deposit % in market share	Loans % in market share
20	Dena Bank	1.46	1.57	1.47
21	State Bank of Patiala	1.44	1.43	1.47
22	United Bank of India	1.41	1.55	1.22
23	State Bank of Travancore	1.25	1.35	1.17
24	State Bank of Bikaner and Jaipur	1.20	1.26	1.30
25	Punjab and Sind Bank	1.12	1.22	1.14
26	State Bank of Mysore	0.91	0.94	0.96
27	Bharatiya Mahila Bank Ltd.	0.02	0.01	0.01
	Total	100	100	100

Source: Author's calculation

Table shows the public sector banks in India and its market share contribution in the year 2016. There are 27 public sector banks in India in the year 2016 State bank of India dominates the industry and Bhartiya Mahila bank attained the last position.

Table 4.8

Three-bank Concentration Ratio (CR3) of the public sector banks in the year 2016.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State bank of India	2357618	25.71	1730722	23.11	1463700	26.16
Bank of Baroda	671376.5	7.32	574037.9	7.66	383770.2	6.86
Punjab national bank	667390.5	7.27	553051.1	7.38	412325.8	7.37
CR3	3696384	40.31	2857811	38.17	2259796	40.39

Source: Author's calculation.

Table shows the three-bank Concentration Ratio (CR3) of the top three public sector banks in the industry. Punjab national bank secured the third position by capturing 7.27% of assets 7.38% of deposits and 7.37% of loans. The three bank Concentration Ratio (CR3) based on three indicators assets, deposits and loans are 40.31%, 38.17%

and 40.39% respectively. So, three-bank Concentration Ratio indicates that there is a lower concentration with perfect competition in the market.

Table 4.9

Five-bank Concentration Ratio (CR5) of the public sector banks in the year 2016.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State bank of India	2357617.54	25.71	1730722	23.11	1463700	26.16
Bank of Baroda	671376.48	7.32	574037.9	7.66	383770.2	6.86
Punjab national bank	667390.46	7.27	553051.1	7.38	412325.8	7.37
Bank of India	609913.93	6.65	513004.5	6.85	359189	6.42
Canara bank	552960.78	6.03	479791.6	6.40	324714.8	5.80
CR5	4859259	53.00	3850608	51.43	2943700	52.62

Source: Author's calculation.

The above table shows the Five bank Concentration Ratio (CR5) of the top five banks in the public banking sector in India. Fifth position attained by canara bank by capturing 6.03% of total assets, 6.40% of capital and 5.80% of loans. In the year 2016, the Market Concentration of top five public sector banks (CR5) based on asset, deposits and loans are 53.00%, 51.43% and 52.62% respectively. So, in 2016 the concentration ratios shows that there was low Market Concentration in the industry with perfect competition market situation moving towards oligopoly market condition.

Table 4.10

Market share percentage of the assets, deposits, and loans of the public sector banks in India in the year 2017.

No	Banks	Assets % in market share	Deposit % in market share	Loans % in market share
1	State Bank of India	27.79	25.32	28.27
2	Punjab National Bank	7.40	7.70	7.55
3	Bank of Baroda	7.14	7.45	6.90
4	Bank of India	6.43	6.69	6.59
5	Canara Bank	5.99	6.13	6.15
6	Union Bank of India	4.65	4.65	5.15
7	IDBI Bank Limited	3.72	3.32	3.43
8	Central Bank of India	3.42	3.67	2.51
9	Syndicate Bank	3.07	3.23	3.59
10	Oriental Bank of Commerce	2.60	2.72	2.84
11	Corporation Bank	2.55	2.73	2.53
12	Indian Overseas Bank	2.54	2.62	2.53
13	Allahabad Bank	2.43	2.50	2.71
14	UCO Bank	2.38	2.49	2.15
15	Andhra Bank	2.29	2.42	2.46
16	Indian Bank	2.24	2.26	2.30
17	State Bank of Hyderabad	1.68	1.76	1.43
18	Bank of Maharashtra	1.64	1.72	1.72
19	Vijaya Bank	1.59	1.65	1.70
20	United Bank of India	1.45	1.57	1.19
21	Dena Bank	1.33	1.41	1.31
22	State Bank of Travancore	1.29	1.42	0.87
23	State Bank of Patiala	1.26	1.25	1.26
24	State Bank of Bikaner and Jaipur	1.19	1.29	1.17
25	Punjab and Sind Bank	0.99	1.06	1.05
26	State Bank of Mysore	0.91	0.97	0.62
27	Bharatiya Mahila Bank Ltd.	0.02	0.01	0.01
	Total	100	**100**	**100**

Source: Author's calculation

Table shows the public sector banks in India and its market share contribution in the year 2017. State bank of India dominates the industry and attained the first position in the market share of assets, deposits, and loan. Bhartiya Mahila bank attained the last position by acquiring .021% of the market share.

Table 4.11

Three-bank Concentration Ratio (CR3) of the public sector banks in the year 2017.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State bank of India	2705966.3	27.79	2044751	25.31	1571078	28.27
Punjab national bank	720330.55	7.39	621704	7.69	419493.2	7.54
Bank of Baroda	694875.42	7.13	601675.2	7.44	383259.2	6.89
CR3	4121172	42.32	3268131	40.46	2373831	42.71

Source: Author's calculation.

Table shows the three-bank Concentration Ratio (CR3) of the public sector banks in India in the year 2017. While comparing with the previous year, in the year 2017 Punjab national bank has attained the second position. The Concentration Ratio for the three banks (CR3) based on the indicator's assets, deposits and loans are 42.32%, 40.46% and 42.71% respectively. Unlike the previous year, bank of Baroda fall down to third position by capturing 7.13% of assets 7.44% of deposits and 6.89% of loans. State bank of India dominates the industry by attain 27.79% on assets 25.31% on deposits and 28.27% on loans. So, from the CR3 it can be interpreted that there is a lower concentration with perfectly competitive market.

Table 4.12

Five-bank Concentration Ratio (CR5) of the public sector banks in the year 2017.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	2705966.3	27.79	2044751	25.31	1571078	28.27
Punjab National Bank	720330.55	7.39	621704	7.69	419493.2	7.54
Bank of Baroda	694875.42	7.13	601675.2	7.44	383259.2	6.89
Bank of India	626309.3	6.43	540032	6.68	366481.7	6.59
Canara bank	583519.4	5.99	495275.2	6.13	342008.8	6.15
CR5	5331001	54.75	4303438	53.28	3082321	55.46

Source: Author's calculation

Table shows the five-bank Concentration Ratio (CR5) of the public sector banks in India in the year 2017. The Concentration Ratio for the five banks in the industry based on the indicators assets, deposits and loans are 54.75%, 53.28% and 55.46%. possess a lower concentration in the banking industry.

4.5 Degree of Market Concentration in Indian public sector banks during the merger period 2018.

The following table shows the degree of Market Concentration of the public banking sector in the merger year 2018 based on the market share percentage of Assets, Deposits, and Loans.

Table 4.13

Market share percentage of assets deposits and loans of public sector banks in India in the year 2018.

No	Banks	Assets	Deposits	Loan
1	State Bank of India	36.42	34.69	33.96
2	Punjab National Bank	8.00	8.00	7.61
3	Bank of Baroda	7.17	7.16	8.00

No	Banks	Assets	Deposits	Loan
4	Canara Bank	6.15	6.35	6.70
5	Bank of India	6.07	6.30	5.99
6	Union Bank of India	4.86	4.94	5.07
7	IDBI Bank Limited	3.49	3.00	3.01
8	Central Bank of India	3.25	3.57	2.75
9	Syndicate Bank	3.23	3.30	3.70
10	Indian Bank	2.52	2.52	2.75
11	Allahabad Bank	2.52	2.59	2.67
12	Indian Overseas Bank	2.47	2.62	2.33
13	Andhra Bank	2.41	2.52	2.62
14	Oriental Bank of Commerce	2.33	2.51	2.39
15	Corporation Bank	2.21	2.22	2.10
16	UCO Bank	2.15	2.20	1.89
17	Vijaya Bank	1.77	1.90	2.04
18	Bank of Maharashtra	1.56	1.68	1.51
19	United Bank of India	1.44	1.57	1.10
20	Dena Bank	1.20	1.28	1.15
21	Punjab and Sind Bank	1.13	1.23	1.17
	Public Sector Banks	**100**	**100**	**100**

Source: Author's calculation.

Table shows the public sector banks in India and their market share in the year 2018. Comparing with the previous accounting year 2016-2017, in 2017-2018 there is reduction of six banks in the industry and number of total banks reduced to 21. The visible difference in the year 2018 is that the higher market share acquisition of state bank of India on assets, deposits, and loan. In the previous year, the state bank of India had 27.79% of share on assets 25.31% of share on deposits and 28.27% of share on loans but in 2018 the market share percentages increased to 34.42%, 32.76% and 33.96% respectively. It is mainly because of the mega merger of SBI with its associates and Bhartiya Mahila bank. The state bank of India has acquired all its associate banks and Bhartiya Mahila bank in the year 2017 April.

Table 4.14

Three -bank Concentration Ratio (CR3) of the public sector banks in the year 2018.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	3454752	36.42	2706343	34.69	1934880	33.96
Punjab National Bank	765830.1	8.00	642226.2	8.00	433734.7	7.61
Bank of Baroda	719999.8	7.17	591314.8	7.16	427431.8	8.00
CR3	4940582	51.59	3939884	49.85	2796047	49.57

Source: Author's calculation.

Table shows the three-bank Concentration Ratio (CR3) of the top three public sector banks in India based on the assets, deposits, and loans market share percentage in the industry. State bank of India has attained the top position by acquiring 36.42% of the market share on assets and 34.69% of market share on deposits and 33.96% of market share on loans. The three-bank Concentration Ratio (CR3) based on the three indicators assets, deposits and loans are 51.59%, 49.85% and 49.57% respectively. In the previous year, the three-bank Concentration Ratio (CR3) of assets, deposits and loans were 42.32%, 40.46% and 42.71% respectively. There is a notable increase in all these three indicators. The Concentration Ratio falls between 50% to 70% indicates medium Market Concentration with oligopoly competitive market condition. So, here CR3 indicates a moderate Market Concentration with oligopoly competition in the industry.

Table 4.15

Five -bank Concentration Ratio (CR5) of the public sector banks in the year 2018.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	3454752	34.42	2706343	32.75	1934880	33.96
Punjab National Bank	765830.1	7.63	642226.2	7.77	433734.7	7.61
Bank of Baroda	719999.8	7.17	591314.8	7.15	427431.8	7.50
Canara Bank	616886.1	6.14	524771.9	6.35	381703	6.69
Bank of India	609574.8	6.07	520854.4	6.30	341380.2	5.99
CR5	6167043	61.45	4985511	60.34	3519130	61.76

Source: Author's calculation.

Table shows the Concentration Ratio of the top five banks in the industry. Five bank Concentration Ratio (CR5) based on the three indicators assets, deposits and loans are 61.45%, 60.34% and 61.76% in the year 2018. The Concentration Ratio lies in between 50%- 80% indicates a medium concentration in the industry. So, five bank Concentration Ratio (CR5) of the public sector banks in India in the year 2018 has moderately concentrated industry with oligopoly market condition.

4.6 Degree of Market Concentration in Indian public sector banks during post-merger period (2019-2022).

The following tables show the degree of Market Concentration of the public banking sector during the pre-merger period from 2019-2022 based on the market share percentage of Assets, Deposits, and Loans.

Table 4.16

Market share percentage of assets deposits and loans of public sector banks in India in the year 2019.

No	Banks	Assets	Deposits	Loans
1	State Bank of India	36.21	34.31	37.09
2	Bank of Baroda	7.68	7.53	7.96
3	Punjab National Bank	7.62	7.97	7.78
4	Canara Bank	6.83	7.06	7.26
5	Bank of India	6.15	6.14	5.79
6	Union Bank of India	4.86	4.90	5.04
7	Central Bank of India	3.25	3.53	2.49
8	Syndicate Bank	3.06	3.06	2.91
9	Indian Bank	2.75	2.85	3.08
10	Oriental Bank of Commerce	2.67	2.74	2.71
11	Indian Overseas Bank	2.45	2.62	2.25
12	Andhra Bank	2.45	2.59	2.70
13	Allahabad Bank	2.44	2.53	2.41
14	UCO Bank	2.26	2.33	1.69
15	Corporation Bank	2.10	2.17	2.06
16	Vijaya Bank	1.88	2.07	2.22
17	Bank of Maharashtra	1.61	1.66	1.40
18	United Bank of India	1.49	1.59	1.14
19	Dena Bank	1.07	1.19	0.88
20	Punjab and Sind Bank	1.07	1.16	1.17
	Public Sector Banks	100	100	100

Source: Author's calculation.

Table shows the public sector banks in India and its market share on assets, deposits and loan in the year 2019. In 2019 IDBI bank has takeover by life insurance corporation (LIC) India. It become subsidiary of LIC with effect from 21st January 2019. So, the number of banks reduced to 20 in the year 2019.

Table 4.17

Three -bank Concentration Ratio (CR3) of the public sector banks in the year 2019.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	3680914.3	36.21	2911386	34.30	2185877	37.09
Bank of Baroda	780987.4	7.68	638689.7	7.52	468818.7	7.95
Punjab National Bank	774949.46	7.62	676030.1	7.96	458249.2	7.77
CR3	5236851.1	51.52	4226106	49.79	3112945	52.82

Source: Author's calculation.

Table shows the three-bank Concentration Ratio (CR3) of public sector banks in India in the year 2019. Three bank Concentration Ratio (CR3) based on the three indicators assets, deposits and loans are 51.52%, 49.79% and 52.82% respectively. For the first time in the public banking sector history, the three-bank Concentration Ratio (CR3) based on assets and loan market captured more than 50% of the market share. Which means, among all 20 public sector banks in the industry, 50% of the contribution towards the total assets and loans are by these three banks. Indicates moderate concentration with oligopoly market condition.

Table 4.18

Five -bank Concentration Ratio (CR5) of the public sector banks in the year 2019.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	3680914.3	36.21	2911386	34.30	2185877	37.09
Bank of Baroda	780987.4	7.68	638689.7	7.52	468818.7	7.95
Punjab National Bank	774949.46	7.62	676030.1	7.96	458249.2	7.77
Canara Bank	694766.69	6.83	599033.3	7.05	427727.3	7.25
Bank of India	625222.84	6.15	520862.4	6.13	341005.9	5.78
CR5	6556840.64	64.51	5346001	62.99	3881678	65.87

Source: Author's calculation.

Table shows the five bank concentration ratios of the public sector banks in India in the year 2019. Five bank Concentration Ratio (CR5) based on the indicators assets, deposits and loans are 64.51%, 62.99% and 65.85%. which indicates moderately concentrated market with oligopoly competition.

Table 4.19

Market share percentage of assets deposits and loans of public sector banks in India in the year 2020.

No	Banks	Assets	Deposits	Loans
1	State Bank of India	36.65	35.83	37.76
2	Bank of Baroda	10.74	10.45	11.21
3	Punjab National Bank	7.70	7.78	7.66
4	Canara Bank	6.71	6.91	7.02
5	Bank of India	6.09	6.14	5.99
6	Union Bank of India	5.11	4.98	5.12
7	Central Bank of India	3.30	3.47	2.45
8	Syndicate Bank	3.03	3.11	2.99
9	Indian Bank	2.87	2.88	3.21
10	Oriental Bank of Commerce	2.49	2.54	2.57
11	Indian Overseas Bank	2.42	2.46	1.97

No	Banks	Assets	Deposits	Loans
12	Allahabad Bank	2.39	2.53	2.32
13	Andhra Bank	2.26	2.35	2.56
14	UCO Bank	2.19	2.14	1.64
15	Corporation Bank	2.13	2.27	2.07
16	Bank of Maharashtra	1.57	1.66	1.41
17	United Bank of India	1.42	1.52	1.10
18	Punjab and Sind Bank	0.93	0.99	0.95
	Public Sector Banks	100	100	100

Source: Author's calculation.

Table shows the public sector banks in India in the year 2020. There are only 18 public sector banks in the year 2020. This is because of the merger of Vijaya bank and Dena bank with bank of Baroda in the year 2019.

Table 4.20

Three -bank Concentration Ratio (CR3) of the public sector banks in the year 2020.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	3951394	36.64	3241621	35.82	2325290	37.75
Bank of Baroda	1157916	10.73	945984.4	10.45	690120.7	11.20
Punjab National Bank	830665.9	7.70	703846.3	7.77	471827.7	7.66
CR3	5939975	55.08	4891451	54.05	3487238	56.62

Source: Author's calculation

Table shows the Concentration Ratio of the top three banks in the public banking sector in India in the year 2020. After the merger with Vijaya and Dena bank, bank of Baroda has bagged the second position in market share of assets, deposits and loans by increasing the share percentage of total assets from 7.68 % to 10.73%, total deposits from 7.52% to 10.45% and total loans from 7.95% to 11.20%. Three bank concentration ratios (CR3) are 55.08%, 54.0% and 56.62%. from the concentration ratios it is clear that there is a moderate concentration and oligopoly competition between top three banks in the industry.

Table 4.21

Five -bank Concentration Ratio (CR5) of the public sector banks in the year 2020.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	3951393.92	36.64	3241621	35.82	2325290	37.75
Bank of Baroda	1157915.52	10.73	945984.4	10.45	690120.7	11.20
Punjab National Bank	830665.91	7.70	703846.3	7.77	471827.7	7.66
Canara Bank	723874.75	6.71	625351.2	6.91	432175.2	7.01
Bank of India	656995.48	6.09	555505	6.13	368883.3	5.99
CR5	7320846	67.89	6072308	67.10	4288297	69.63

Source: Author's calculation.

Table shows the five bank concentration ratios of the top five public sector banks in the industry in the year 2020. Bank of India has attained the fifth position by capturing 6.09% on assets, 6.13% on deposits and 5.99% loans. The five-bank concentration ratios based on the assets, deposits and loans are 67.89%, 67.10% and 69.63% respectively. Concentration Ratio in between 50% to 80% represents moderately concentrated market with oligopoly competition.

Table 4.22

Market share percentage of assets deposits and loans of public sector banks in India in the year 2021.

No	Banks	Assets	Deposits	Loans
1	State Bank of India	38.65	37.18	38.58
2	Punjab National Bank	10.75	11.17	10.62
3	Bank of Baroda	9.85	9.77	11.13
4	Canara Bank	9.83	10.21	10.07
5	Union Bank of India	9.14	9.33	9.31
6	Bank of India	6.19	6.33	5.76
7	Indian Bank	5.34	5.43	5.73
8	Central Bank of India	3.15	3.33	2.47
9	Indian Overseas Bank	2.34	2.43	2.01

No	Banks	Assets	Deposits	Loans
10	UCO Bank	2.16	2.08	1.75
11	Bank of Maharashtra	1.68	1.76	1.61
12	Punjab and Sind Bank	0.94	0.97	0.96
	Public Sector Banks	100	100	100

Source: Author's calculation.

Table shows the public sector banks in India in the year 2021. There were 18 public sector banks in the year 2020 but in 2021 there are only 12 banks in the industry. It is mainly because of the mergers that happened in the public banking sector in the year 2020 April 1st. syndicate bank has merged with canara bank, oriental bank of commerce and united bank of India has merged with Punjab national bank, Allahabad bank has merged with Indian bank and finally Andra bank and corporation bank have merged with union bank of India.

Table 4.23

Three -bank Concentration Ratio (CR3) of the public sector banks in the year 2021.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	4534430	38.65	3681277	37.18	2449498	38.58
Punjab National Bank	1260633	10.74	1106332	11.17	674230.1	10.61
Bank of Baroda	1155365	9.84	966996.9	9.76	706300.5	11.12
CR3	6950427	59.24	5754606	58.12	3830028	60.32

Source: Author's calculation

Table shows the three-bank Concentration Ratio of the public sector banks in India in the year 2021. State bank of India has attained the first position by capturing 38.65% of assets 37.18% of deposits and 38.58% of loans. CR3 based on the indicators assets, deposits and loans are 59.24%, 58.12% and 60.32% respectively. The concentration ratios indicates that the three banks altogether acquiring almost 60% of the industry's total asset, deposits and loan with moderate concentration and oligopoly market condition.

Table 4.24

Five -bank Concentration Ratio (CR5) of the public sector banks in the year 2021.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	4534429.63	38.65	3681277.08	37.18	2449497.79	38.58
Punjab National Bank	1260632.62	10.74	1106332.47	11.17	674230.08	10.61
Bank of Baroda	1155364.77	9.84	966996.93	9.76	706300.51	11.12
Canara Bank	1153675.03	9.83	1010874.58	10.21	639048.99	10.06
Union Bank of India	1071705.84	9.13	923805.34	9.33	590982.88	9.30
CR5	9175808	78.21	7689286	77.66	5060060	79.70

Source: Author's calculation.

Table shows the five-bank Concentration Ratio (CR5) of the public sector banks in India in the year 2021. Union bank of India attained fifth position by capturing 9.13% of assets 9.33% of deposits and 9.30% of loans. The five bank Concentration Ratio (CR5) based on three indicators assets, deposits and loans are 78.21%, 77.66% and 79.70% respectively. CR5 Indicates a moderately concentrated market with near to monopoly competitive market.

Table 4.25

Market share percentage of assets deposits and loans of public sector banks in India in the year 2022.

No	Banks	Assets	Deposits	Loans
1	State Bank of India	39.25	37.80	38.81
2	Punjab National Bank	10.35	10.69	10.34
3	Bank of Baroda	10.06	9.76	11.03
4	Canara Bank	9.66	10.14	9.99
5	Union Bank of India	9.35	9.63	9.38
6	Bank of India	5.78	5.86	5.97

No	Banks	Assets	Deposits	Loans
7	Indian Bank	5.29	5.54	5.53
8	Central Bank of India	3.04	3.20	2.39
9	Indian Overseas Bank	2.36	2.45	2.05
10	UCO Bank	2.11	2.09	1.74
11	Bank of Maharashtra	1.81	1.89	1.86
12	Punjab and Sind Bank	0.95	0.95	0.90
	Public Sector Banks	**100**	**100**	**100**

Source: Author's calculation

Table shows the public sector banks in India in the year 2022. Same as previous year there are 12 banks in the industry. Assets percentage of state bank of India is 39.25%, 37.80% on deposits and 38.81 % on loans. Punjab and Sind bank attained last and 12th place by contributing 0.95% to assets 0.95% to deposits and 0.90% to loans.

Table 4.26

Three -bank Concentration Ratio (CR3) of the public sector banks in the year 2022.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	4987597.4	39.25	4051534.1	37.80	2733966.5	38.81
Punjab National Bank	1314805.0	10.35	1146218.4	10.69	728185.68	10.34
Bank of Baroda	1277999.8	10.06	1045938.5	9.76	777155.18	11.03
CR3	7580402.2	59.66	6243691.1	58.26	4239307.4	60.18

Source: Author's calculation

Table shows the three-bank Concentration Ratio (CR3) of public sector banks in India in the year 2022. Three bank Concentration Ratio (CR3) based on the three indicators assets, deposits and loans are 59.66%, 58.26% and 60.18% respectively. It indicates a moderately concentrated banks with oligopolistic competition.

Table 4.27

Five -bank Concentration Ratio (CR5) of the public sector banks in the year 2022.

Bank	Assets (in Cr.)	Share percentage in total assets	Deposits (in Cr.)	Share percentage in deposits	Loans (in Cr.)	Share percentage in loans
State Bank of India	4987597.4	39.25	4051534.1	37.80	2733966.5	38.81
Punjab National Bank	1314805.0	10.35	1146218.4	10.69	728185.68	10.34
Bank of Baroda	1277999.8	10.06	1045938.5	9.76	777155.18	11.03
Canara Bank	1226979.67	9.66	1086409.25	10.14	703601.82	9.99
Union Bank of India	1187591.06	9.35	1032392.63	9.63	661004.66	9.38
CR5	9994972.99	78.66	8362493.01	78.03	5603913.93	79.56

Source: Author's calculation

Table shows the five-bank Concentration Ratio (CR5) of the public sector banks in India in the year 2022. Union bank of India attained fifth position by capturing 9.35% of assets 9.63% of deposits and 9.38% of loans. The five-bank Concentration Ratio (CR5) based on three indicators assets, deposits and loans are 78.66%, 78.03% and 79.56% respectively. CR5 Indicates a market with very close to higher concentration and monopoly competitive situation.

Herfindahl-Hirschman Index (HHI)

Table 4.28

Herfindahl-Hirschman Index (HHI) for public sector banks in India for the indicator asset in the year 2014.

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
1	State Bank of India	22.50	506.18	21.16	447.86	23.72	562.49
2	Bank of Baroda	8.28	68.50	8.63	74.55	7.78	60.57
3	Bank of India	7.19	51.74	7.24	52.40	7.27	52.82
4	Punjab National Bank	6.91	47.72	6.85	46.93	6.85	46.88
5	Canara Bank	6.17	38.11	6.39	40.77	5.90	34.83
6	Union Bank of India	4.44	19.71	4.52	20.41	4.49	20.17
7	IDBI Bank Limited	4.13	17.05	3.64	13.27	3.48	12.08
8	Central Bank of India	3.63	13.20	3.58	12.80	3.88	15.02
9	Indian Overseas Bank	3.45	11.90	3.46	11.97	3.45	11.89
10	Syndicate Bank	3.16	9.99	3.22	10.39	3.41	11.62
11	UCO Bank	3.00	9.01	3.03	9.17	2.93	8.60
12	Corporation Bank	2.79	7.77	2.94	8.62	2.73	7.43
13	Allahabad Bank	2.77	7.65	2.94	8.61	2.69	7.22
14	Oriental Bank of Commerce	2.76	7.64	2.90	8.39	2.71	7.32
15	Indian Bank	2.35	5.52	2.46	6.07	2.40	5.74
16	Andhra Bank	2.10	4.41	2.15	4.63	2.11	4.45
17	State Bank of Hyderabad	1.78	3.15	1.89	3.56	1.60	2.55
18	Vijaya Bank	1.72	2.97	1.81	3.29	1.88	3.52
19	Bank of Maharashtra	1.71	2.93	1.77	3.14	1.74	3.04

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
20	United Bank of India	1.57	2.46	1.69	2.86	1.29	1.66
21	Dena Bank	1.57	2.46	1.67	2.79	1.52	2.31
22	State Bank of Patiala	1.43	2.05	1.36	1.85	1.49	2.22
23	State Bank of Travancore	1.32	1.75	1.36	1.84	1.36	1.85
24	Punjab and Sind Bank	1.19	1.41	1.29	1.65	1.12	1.26
25	State Bank of Bikaner & Jaipur	1.14	1.30	1.12	1.26	1.26	1.58
26	State Bank of Mysore	0.93	0.86	0.93	0.87	0.97	0.94
27	Bharatiya Mahila Bank Ltd.	0.01	0.00	0.00	0.00	0.00	0.00
	Total	100	847.44	100	799.97	100	890.07

Source: Author's calculation.

Table shows the Herfindahl-Hirschman Index (HHI) for the indicators assets, deposits and loans of all the 27 public sector banks in India in the year 2014. HHI less 1500 represents a highly competitive market with low market concentration. Comparing with previous year there is a slight increase in the HHI score of public sector banks. But it doesn't make any big difference in the Market Concentration and competition.

Table 4.29

Herfindahl-Hirschman Index (HHI) for public sector banks in India for the indicator asset in the year 2015.

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
1	State Bank of India	23.60	556.89	21.92	480.38	23.74	563.56
2	Bank of Baroda	8.24	67.87	8.58	73.69	7.82	61.10
3	Bank of India	7.13	50.82	7.39	54.66	7.34	53.89
4	Punjab National Bank	6.95	48.33	6.97	48.57	6.95	48.29
5	Canara Bank	6.31	39.87	6.59	43.38	6.03	36.32
6	Union Bank of India	4.40	19.33	4.40	19.40	4.67	21.79
7	IDBI Bank Limited	4.10	16.84	3.61	13.04	3.81	14.48
8	Central Bank of India	3.59	12.92	3.55	12.62	3.44	11.85
9	Syndicate Bank	3.49	12.20	3.55	12.60	3.70	13.70
10	Indian Overseas Bank	3.29	10.83	3.42	11.70	3.14	9.84
11	UCO Bank	2.83	8.03	2.98	8.88	2.69	7.24
12	Oriental Bank of Commerce	2.66	7.05	2.84	8.04	2.65	7.04
13	Allahabad Bank	2.62	6.85	2.69	7.23	2.74	7.49
14	Corporation Bank	2.60	6.78	2.77	7.68	2.65	7.02
15	Indian Bank	2.22	4.94	2.35	5.53	2.30	5.28
16	Andhra Bank	2.13	4.55	2.15	4.64	2.30	5.29
17	State Bank of Hyderabad	1.78	3.17	1.81	3.27	1.92	3.68
18	Bank of Maharashtra	1.68	2.83	1.70	2.88	1.80	3.24
19	Vijaya Bank	1.64	2.70	1.76	3.08	1.58	2.51
20	Dena Bank	1.50	2.24	1.61	2.60	1.44	2.08
21	United Bank of India	1.42	2.01	1.51	2.29	1.22	1.49

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
22	State Bank of Patiala	1.34	1.81	1.27	1.61	1.44	2.06
23	State Bank of Travancore	1.22	1.48	1.27	1.60	1.25	1.57
24	State Bank of Bikaner & Jaipur	1.18	1.39	1.17	1.37	1.27	1.61
25	Punjab and Sind Bank	1.13	1.27	1.21	1.45	1.17	1.36
26	State Bank of Mysore	0.92	0.84	0.92	0.84	0.95	0.90
27	Bharatiya Mahila Bank Ltd.	0.02	0.00	0.01	0.00	0.01	0.00
	Total	100	893.84	100	833.06	100	894.68

Source: Author's calculation.

Table shows the Herfindahl-Hirschman Index (HHI) for the indicators assets, deposits and loans of all the 27 public sector banks in India in the year 2015. The HH Index for assets, deposits and loans are 893.84, 833.06 and 894.68, respectively. The result of HH Index shows that there is competitive market structure with lower concentration in the public banking sector in the year 2015.

Table 4.30

Herfindahl-Hirschman Index (HHI) for public sector banks in India for the indicator asset in the year 2016.

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
1	State Bank of India	25.72	661.28	23.12	534.48	26.17	684.74
2	Bank of Baroda	7.32	53.63	7.67	58.80	6.86	47.07
3	Punjab National Bank	7.28	52.99	7.39	54.58	7.37	54.34
4	Bank of India	6.65	44.26	6.85	46.96	6.42	41.24
5	Canara Bank	6.03	36.38	6.41	41.08	5.81	33.70

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
6	Union Bank of India	4.41	19.48	4.58	20.96	4.78	22.85
7	IDBI Bank Limited	4.09	16.77	3.55	12.60	3.86	14.90
8	Syndicate Bank	3.36	11.28	3.50	12.22	3.60	12.96
9	Central Bank of India	3.33	11.10	3.56	12.64	3.22	10.36
10	Indian Overseas Bank	2.99	8.96	3.00	8.99	2.88	8.27
11	UCO Bank	2.67	7.13	2.77	7.65	2.25	5.07
12	Allahabad Bank	2.62	6.84	2.68	7.18	2.72	7.42
13	Oriental Bank of Commerce	2.62	6.84	2.79	7.79	2.66	7.08
14	Corporation Bank	2.56	6.56	2.74	7.51	2.51	6.29
15	Indian Bank	2.22	4.94	2.38	5.67	2.31	5.32
16	Andhra Bank	2.18	4.76	2.33	5.42	2.34	5.47
17	State Bank of Hyderabad	1.80	3.22	1.83	3.36	1.99	3.94
18	Bank of Maharashtra	1.76	3.08	1.86	3.45	1.92	3.70
19	Vijaya Bank	1.59	2.52	1.68	2.81	1.59	2.53
20	Dena Bank	1.46	2.12	1.57	2.46	1.47	2.17
21	State Bank of Patiala	1.44	2.06	1.43	2.04	1.47	2.16
22	United Bank of India	1.41	1.99	1.55	2.42	1.22	1.48
23	State Bank of Travancore	1.25	1.56	1.35	1.82	1.17	1.37
24	State Bank of Bikaner and Jaipur	1.20	1.45	1.26	1.58	1.30	1.70
25	Punjab and Sind Bank	1.12	1.25	1.22	1.49	1.14	1.31
26	State Bank of Mysore	0.91	0.82	0.94	0.89	0.96	0.93
27	Bharatiya Mahila Bank Ltd.	0.02	0.00	0.01	0.00	0.01	0.00
	Total	100	973.28	100	866.85	100	988.35

Source: Author's calculation.

Table shows the Herfindahl-Hirschman Index (HHI) for the indicators assets, deposits and loans of all the 27 public sector banks in India in the year 2016. Comparing with previous year there is a slight increase in the HH Index of all three indicators. But it doesn't make any difference in the prevailing market structure or competitive conditions. The HH Index for assets is 973.28, for deposits 866.85 and for loans 988.35.

Table 4.31

Herfindahl-Hirschman Index (HHI) for public sector banks in India for the indicator asset in the year 2017.

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
1	State Bank of India	27.79	772.38	25.32	640.92	28.27	799.24
2	Punjab National Bank	7.40	54.73	7.70	59.25	7.55	56.98
3	Bank of Baroda	7.14	50.93	7.45	55.49	6.90	47.56
4	Bank of India	6.43	41.38	6.69	44.71	6.59	43.49
5	Canara Bank	5.99	35.92	6.13	37.60	6.15	37.88
6	Union Bank of India	4.65	21.62	4.65	21.66	5.15	26.57
7	IDBI Bank Limited	3.72	13.81	3.32	11.05	3.43	11.79
8	Central Bank of India	3.42	11.73	3.67	13.49	2.51	6.29
9	Syndicate Bank	3.07	9.43	3.23	10.41	3.59	12.91
10	Oriental Bank of Commerce	2.60	6.76	2.72	7.37	2.84	8.05
11	Corporation Bank	2.55	6.48	2.73	7.46	2.53	6.38
12	Indian Overseas Bank	2.54	6.44	2.62	6.85	2.53	6.39
13	Allahabad Bank	2.43	5.93	2.50	6.25	2.71	7.36
14	UCO Bank	2.38	5.65	2.49	6.21	2.15	4.64
15	Andhra Bank	2.29	5.25	2.42	5.86	2.46	6.06
16	Indian Bank	2.24	5.02	2.26	5.11	2.30	5.28

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
17	State Bank of Hyderabad	1.68	2.81	1.76	3.09	1.43	2.04
18	Bank of Maharashtra	1.64	2.68	1.72	2.96	1.72	2.95
19	Vijaya Bank	1.59	2.53	1.65	2.71	1.70	2.89
20	United Bank of India	1.45	2.10	1.57	2.47	1.19	1.42
21	Dena Bank	1.33	1.77	1.41	1.99	1.31	1.71
22	State Bank of Travancore	1.29	1.67	1.42	2.02	0.87	0.77
23	State Bank of Patiala	1.26	1.59	1.25	1.56	1.26	1.59
24	State Bank of Bikaner and Jaipur	1.19	1.43	1.29	1.66	1.17	1.36
25	Punjab and Sind Bank	0.99	0.99	1.06	1.12	1.05	1.10
26	State Bank of Mysore	0.91	0.84	0.97	0.94	0.62	0.38
27	Bharatiya Mahila Bank Ltd.	0.02	0.00	0.01	0.00	0.01	0.00
	Total	100	1071.85	100	960.21	100	1103.09

Source: Author's calculation.

Table shows the Herfindahl-Hirschman Index (HHI) for the indicators assets, deposits and loans of all the 27 public sector banks in India in the year 2017. The HH Index for assets is 1071.85, for deposits 960.21 and for loans 1103.09. It indicates a lower Market Concentration with highly competitive marketplace in the public banking sector in the year 2017.

Table 4.32

Herfindahl-Hirschman Index (HHI) for public sector banks in India for the indicator asset in the year 2018.

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
1	State Bank of India	34.43	1185.24	32.76	1072.91	33.96	1153.35
2	Punjab National Bank	7.63	58.24	7.77	60.42	7.61	57.96
3	Bank of Baroda	7.17	51.48	7.16	51.22	7.50	56.28
4	Canara Bank	6.15	37.79	6.35	40.34	6.70	44.89
5	Bank of India	6.07	36.90	6.30	39.74	5.99	35.90
6	Union Bank of India	4.86	23.59	4.94	24.44	5.07	25.69
7	Idbi Bank Limited	3.49	12.17	3.00	9.00	3.01	9.09
8	Central Bank of India	3.25	10.57	3.57	12.73	2.75	7.55
9	Syndicate Bank	3.23	10.42	3.30	10.90	3.70	13.67
10	Indian Bank	2.52	6.34	2.52	6.36	2.75	7.55
11	Allahabad Bank	2.52	6.34	2.59	6.68	2.67	7.12
12	Indian Overseas Bank	2.47	6.11	2.62	6.89	2.33	5.41
13	Andhra Bank	2.41	5.82	2.52	6.34	2.62	6.85
14	Oriental Bank of Commerce	2.33	5.41	2.51	6.30	2.39	5.73
15	Corporation Bank	2.21	4.89	2.22	4.92	2.10	4.43
16	UCO Bank	2.15	4.64	2.20	4.84	1.89	3.56
17	Vijaya Bank	1.77	3.13	1.90	3.62	2.04	4.16
18	Bank of Maharashtra	1.56	2.43	1.68	2.83	1.51	2.27
19	United Bank of India	1.44	2.08	1.57	2.45	1.10	1.20
20	Dena Bank	1.20	1.45	1.28	1.65	1.15	1.33
21	Punjab and Sind Bank	1.13	1.29	1.23	1.52	1.17	1.37
	Total	100	1476.33	100	1376.11	100	1455.34

Source: Author’s calculation.

Table shows the Herfindahl-Hirschman Index (HHI) for the indicators assets, deposits and loans of all the 21 public sector banks in India in the year 2018. The number of banks has reduced to 21 because of SBI mega merger with associate banks and Barathiya Mahila bank. The HH Index for assets, deposits and loans are 1476.33, 1376.11 and 1455.34, respectively. There is a sudden hike in HH Index as a result of mega merger. From the HH Index it can be interpreted as the there is a low Market Concentration with good competitive environment.

Table 4.33

Herfindahl-Hirschman Index (HHI) for public sector banks in India for the indicator asset in the year 2019.

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
1	State Bank of India	36.22	1311.74	34.31	1176.99	37.09	1376.03
2	Bank of Baroda	7.68	59.05	7.53	56.64	7.96	63.30
3	Punjab National Bank	7.63	58.14	7.97	63.46	7.78	60.48
4	Canara Bank	6.84	46.73	7.06	49.83	7.26	52.69
5	Bank of India	6.15	37.84	6.14	37.67	5.79	33.49
6	Union Bank of India	4.86	23.63	4.90	24.02	5.04	25.39
7	Central Bank of India	3.25	10.59	3.53	12.49	2.49	6.18
8	Syndicate Bank	3.06	9.38	3.06	9.38	2.91	8.45
9	Indian Bank	2.76	7.59	2.85	8.14	3.08	9.46
10	Oriental Bank of Commerce	2.68	7.17	2.74	7.52	2.71	7.32
11	Indian Overseas Bank	2.46	6.05	2.62	6.88	2.25	5.06
12	Andhra Bank	2.45	6.02	2.59	6.71	2.70	7.26
13	Allahabad Bank	2.45	5.98	2.53	6.38	2.41	5.82
14	UCO Bank	2.27	5.14	2.33	5.44	1.69	2.84

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
15	Corporation Bank	2.10	4.42	2.17	4.73	2.06	4.23
16	Vijaya Bank	1.89	3.57	2.07	4.29	2.22	4.91
17	Bank of Maharashtra	1.62	2.62	1.66	2.75	1.40	1.97
18	United Bank of India	1.49	2.22	1.59	2.53	1.14	1.29
19	Dena Bank	1.07	1.15	1.19	1.41	0.88	0.78
20	Punjab and Sind Bank	1.07	1.15	1.16	1.35	1.17	1.38
	Total	100	1610.2	100	1488.59	100	1678.34

Source: Author's calculation.

Table shows the Herfindahl-Hirschman Index (HHI) for the indicators assets, deposits and loans of all the 20 public sector banks in India in the year 2019. In the year 2019 the IDBI bank has become the subsidiary of LIC India. So, the in 2019 the number of public sector banks has reduced to 20. The HH Index for assets, deposits and loans are 1610.2, 1488.59 and 1878.34, respectively. From the HH Index it can be interpreted as there is a moderately concentrated market structure in the public banking sector in India in the year 2019.

Table 4.34

Herfindahl-Hirschman Index (HHI) for public sector banks in India for the indicator asset in the year 2020.

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
1	State Bank of India	36.65	1342.87	35.83	1283.45	37.76	1425.80
2	Bank of Baroda	10.74	115.32	10.45	109.30	11.21	125.59
3	Punjab National Bank	7.70	59.35	7.78	60.51	7.66	58.70
4	Canara Bank	6.71	45.07	6.91	47.76	7.02	49.25
5	Bank of India	6.09	37.12	6.14	37.69	5.99	35.88
6	Union Bank of India	5.11	26.08	4.98	24.81	5.12	26.17
7	Central Bank of India	3.30	10.92	3.47	12.02	2.45	6.02
8	Syndicate Bank	3.03	9.18	3.11	9.66	2.99	8.97
9	Indian Bank	2.87	8.24	2.88	8.27	3.21	10.33
10	Oriental Bank of Commerce	2.49	6.20	2.54	6.47	2.57	6.58
11	Indian Overseas Bank	2.42	5.85	2.46	6.07	1.97	3.88
12	Allahabad Bank	2.39	5.73	2.53	6.38	2.32	5.39
13	Andhra Bank	2.26	5.12	2.35	5.52	2.56	6.56
14	UCO Bank	2.19	4.79	2.14	4.56	1.64	2.70
15	Corporation Bank	2.13	4.53	2.27	5.15	2.07	4.28
16	Bank of Maharashtra	1.57	2.45	1.66	2.75	1.41	1.99
17	United Bank of India	1.42	2.01	1.52	2.31	1.10	1.20
18	Punjab and Sind Bank	0.93	0.87	0.99	0.98	0.95	0.90
	Total	100	1691.68	100	1633.68	100	1780.20

Source: Author's calculation.

Table shows the Herfindahl-Hirschman Index (HHI) for the indicators assets, deposits and loans of all the 18 public sector banks in India in the year 2020. The number of public sector banks has reduced to 18 because of the merger of Vijaya bank and Dena bank with bank of Baroda. The HH Index for assets, deposits and loans are 1691.68, 1633.68 and 1780.20, respectively. It indicates the presence of moderately concentrated market structure in 2020.

Table 4.35

Herfindahl-Hirschman Index (HHI) for public sector banks in India for the indicator Asset in the year 2021.

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
1	State Bank of India	38.65	1493.99	37.18	1382.48	38.58	1488.60
2	Punjab National Bank	10.75	115.47	11.17	124.86	10.62	112.78
3	Bank of Baroda	9.85	96.99	9.77	95.39	11.13	123.77
4	Canara Bank	9.83	96.71	10.21	104.25	10.07	101.32
5	Union Bank of India	9.14	83.46	9.33	87.06	9.31	86.65
6	Bank of India	6.19	38.28	6.33	40.12	5.76	33.18
7	Indian Bank	5.34	28.47	5.43	29.54	5.73	32.87
8	Central Bank of India	3.15	9.91	3.33	11.11	2.47	6.08
9	Indian Overseas Bank	2.34	5.46	2.43	5.89	2.01	4.05
10	UCO Bank	2.16	4.66	2.08	4.33	1.75	3.08
11	Bank of Maharashtra	1.68	2.81	1.76	3.09	1.61	2.60
12	Punjab and Sind Bank	0.94	0.89	0.97	0.94	0.96	0.92
	Total	100	1977.10	100	1889.05	100	1995.89

Source: Author’s calculation.

Table shows the Herfindahl-Hirschman Index (HHI) for the indicators assets, deposits and loans of all the 12 public sector banks in India in the year 2021. The number of public sector banks has reduced to 12 as a result of the merger of syndicate bank with Canara bank, oriental bank of commerce and united bank of India with Punjab national bank, Allahabad bank with Indian bank and finally Andra bank and corporation bank with union bank of India. The HH Index for assets, deposits and loans are 1977.10, 1889.05 and 1995.89 respectively. Indicates the presence of moderately concentrated market structure.

Table 4.36

Herfindahl-Hirschman Index (HHI) for public sector banks in India for the indicator asset in the year 2022.

No	Banks	Market share % of assets (ASi) in	Square of market share % (ASi^2)	Market share % of Deposits (DSi)	Square of market share % (DSi)	Market share % of loans (LSi)	Square of market share % (LSi^2)
1	State Bank of India	39.25	1540.71	37.80	1429.10	38.81	1506.45
2	Punjab National Bank	10.35	107.07	10.69	114.38	10.34	106.87
3	Bank of Baroda	10.06	101.16	9.76	95.24	11.03	121.73
4	Canara Bank	9.66	93.24	10.14	102.76	9.99	99.78
5	Union Bank of India	9.35	87.35	9.63	92.79	9.38	88.06
6	Bank of India	5.78	33.42	5.86	34.32	5.97	35.69
7	Indian Bank	5.29	27.94	5.54	30.68	5.53	30.53
8	Central Bank of India	3.04	9.26	3.20	10.22	2.39	5.70
9	Indian Overseas Bank	2.36	5.55	2.45	5.98	2.05	4.19
10	UCO Bank	2.11	4.44	2.09	4.37	1.74	3.04
11	Bank of Maharashtra	1.81	3.29	1.89	3.56	1.86	3.47
12	Punjab and Sind Bank	0.95	0.91	0.95	0.91	0.90	0.82
Total		100	2014.34	100	1924.33	100	2006.32

Source: Authors' calculation

Table shows the Herfindahl-Hirschman Index (HHI) (HHI) for the indicators assets, deposits and loans of all the 12 public sector banks in India in the year 2022.The HH Index for assets, deposits and loans are 2014.34, 1924.33 and 2006.32 respectively. From the HH Index it can be considered as there is a moderately concentrated market structure in the year 2022.

4.7 Degree of Market Concentration in Indian public sector banks from 2014 to 2022.

The following table gives a complete picture of market concentration happened in the public banking sector over the past 9 years.

Table 4.37

Trends in Concentration & Competition of the public sector banks in India based on Concentration Ratio (CRk) and Herfindahl-Hirshman's Index (HHI) from 2014 to 2022.

	Year	No. of banks	Assets			Deposits			Loans		
			CR3	CR5	HHI	CR3	CR5	HHI	CR3	CR5	HHI
Pre-Merger	2014	27	38%	51%	847	37%	50%	800	39%	52%	890
	2015	27	39%	52%	894	38%	52%	833	39%	52%	895
	2016	27	40%	53%	973	38%	51%	867	40%	53%	988
	2017	27	42%	55%	1072	40%	53%	960	43%	55%	1103
Merger	2018	21	52%	61%	1476	50%	60%	1376	50%	62%	1455
Post Merger	2019	20	52%	65%	1610	50%	63%	1489	53%	66%	1678
	2020	18	55%	68%	1692	54%	67%	1634	57%	70%	1780
	2021	12	59%	78%	1977	58%	78%	1889	60%	80%	1996
	2022	12	60%	79%	2014	58%	78%	1924	60%	80%	2006

Source: Author's calculation.

The above table shows the 10 years trend in the concentration and competition of the Indian public sector banks by using the techniques Concentration Ratio (CRk) and Herfindahl-Hirshman's Index (HHI). By observing it is clear that there is a gradual

decrease in the number of public sector banks. It is the result of RBI’s policy to rehabilitate or eliminate the sick banks from the industry with the help of mergers and acquisitions (M&A’s) (Bishoni.T.R & Devi, 2017). in the year 2013 there was 26 public sector banks in the industry but at present there are only 12 public sector banks in India. By observing the concentration ratios and HHI of the indicator’s assets, deposits, and loans it is visible that there is an increasing trend in the Market Concentration from 2014 to 2022. The degree of Market Concentration can be taken as the proxy for market competition. If the market shares of assets, deposits and loans are concentrated in the hands of few banks it indicates higher Market Concentration and there would be a lower competition in the market and vice versa.

In the year 2018, there is a sudden increase in the concentration ratios and HHI-score. This is mainly because of the mega merger happened between state bank of India with its associates and Bhartiya Mahila bank. So as a result of the SBI merger, sudden Market Concentration has happened, and it affected the competitiveness of the entire industry. Concentration ratios gives a warning sign that any further mergers in the industry may again lead to severe Market Concentration in the industry. But in contrast the HHI- score indicates that there is moderately concentrated market structure with oligopolistic competition in the industry. But it is sure that any further mergers in the industry will increase the HHI-score to higher.

CHAPTER 5

CORPORATE GOVERNANCE COMPLIANCE PRACTICES

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5.1 Introduction

An important component of effective corporate governance is corporate governance Compliance information. This information is crucial for transparency, accountability, and trust between a company and its stakeholders, such as shareholders, employees, customers, suppliers, and more. This information forms the foundation for ensuring good corporate governance practices.

One of the most important aspects of disclosing corporate governance is the ability to promote transparency. By providing comprehensive disclosure, companies can offer insights into their management, operations, financial status, and strategic direction. This can help stakeholders to understand the company's performance, both in the short and long-term, and the risks it faces. When there is transparency in corporate governance, it can strengthen the trust between the company and its stakeholders, leading to better relationships and potentially improving the company's reputation and standing in the market. Additionally,

Corporate governance Compliance is crucial to building investor confidence and helping them make well-informed decisions. Accurate and timely disclosures reassure investors that the company is managed responsibly and ethically, with their interests in mind. This can lead to increased investment and enhance the company's financial stability and growth. Effective Compliance practices also aid in risk management by identifying and addressing potential issues proactively, thus safeguarding the company's and its stakeholders' interests.

This chapter is trying to explore the corporate governance Compliance practices of selected public sector banks in India with the help of corporate governance index (CG index). CG index is a tool that helps to quantify the qualitative information. The index

comprises 50 governance norms categorized under six corporate governance dimensions, namely, Board effectiveness, audit function, risk management, remuneration committee, shareholders' rights, and information, disclosure, and transparency. The CG index score was determined by collecting data from the annual reports and corporate governance reports of the selected banks.

5.2 Corporate Governance Compliance practices of State Bank of India during Pre- merger and Post-merger Period.

H0: Corporate Governance Compliance Scores of SBI has no significant difference during pre-merger and post-merger period.

Table 5.1

Dimension wise Corporate Governance Compliance Score of SBI during the pre-merger (2014-2017) and post-merger (2019- 2022) period.

Corporate Governance Dimensions	Maximum Score	Compliance Score (Pre- merger)				Compli-ance %	Compliance Score (Post-merger)				Compli-ance %
		2014	2015	2016	2017		2019	2020	2021	2022	
Board Effectiveness	14	9	10	11	11	73.2%	11	11	11	11	78.5%
Audit Function	8	7	7	7	6	84.4%	7	7	7	7	87.5%
Risk Management	5	4	4	4	4	80%	5	5	5	5	100%
Remuneration Committee	5	4	4	4	4	80%	4	5	5	5	95%
Shareholders right & information	10	9	9	10	10	95%	10	10	10	10	100%
disclosure& Transparency	8	8	8	8	7	96.9%	8	8	7	8	96.9%
Total	50	41	42	44	42	84.5%	45	46	45	46	91%

Source: Author's calculation.

The State Bank of India (SBI) has demonstrated a varied degree of compliance across different dimensions of corporate governance over two distinct phases, the pre-merger period (2014-2017) and the post-merger period (2019-2022).

By observing the dimension wise compliance scores of SBI, it is clear that in the post-merger period the compliance scores of board effectiveness have increased to 78.5%% from 73.2% in pre-merger period. The audit function compliance scores have increased to 87.5% from 84.4%. The compliance scores of risk management committee were consistent with compliance score 5 throughout the post-merger period and secured 100%. In the pre-merger period 80% was the compliance score of remuneration committee and it increased to 95% during the post-merger period. compliance related to shareholders right and information was 95% in pre-merger period, and it increased to 100% in the post-merger period. all the above-mentioned variables of SBI had growth in the post-merger period but the variable disclosure and transparency remained consistent in both periods with 96.9% compliance. While observing the overall corporate governance compliance pattern of SBI, there is an improvement in the corporate governance compliance percentage.

In summary, following the merger, the SBI showed a general improvement in its compliance scores across various dimensions, with the total average compliance percentage increasing by around 6.5%. The most noticeable improvements were seen in the dimensions of Risk Management and the Remuneration Committee. The consistent and high compliance percentages in areas like Shareholders' Right & Information and disclosure & Transparency indicate that the company has been particularly transparent in these areas both before and after the merger.

Table 5.2

Corporate Governance Compliance Scores of SBI During Pre-Post Merger Period.

Period	Year	Total Compliance scores	Compliance %	Mean	S. D	Average Compliance %
Pre-merger period	2014	41	82%	42.25	1.25	84.5%
	2015	42	84%			
	2016	44	88%			
	2017	42	84%			
Post-merger period	2019	45	90%	45.50	.577	91%
	2020	46	92%			
	2021	45	90%			
	2022	46	92%			

Source: Author's Calculation.

The above table shows the corporate governance compliance scores of SBI during the pre-post merger period. The mean score during pre-merger period based on 50 governance indicators was 42.25 and the standard deviation is 1.25. The mean score during post-merger period was 45.50 and the standard deviation is .577. The average pre-merger compliance was 84.5%. The average post-merger compliance was 89.60%.

So, while observing the pre- and post-merger period compliance, there is an improvement in the post-merger compliance score. The average compliance score has increased to 91% from 84.5%. There is an increase of 6.5% in the post-merger period compliance.

To analyze whether the differences of corporate governance compliance scores of the SBI during pre-post merger period is statistically significant, the researcher has conducted a paired sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test was 0.203. Since it is greater than 0.05, we assumed that the data is normal and choose the paired sample t test.

Table 5.3

Paired Sample t-test result of SBI for the Corporate Governance Compliance practices during pre-post-merger period.

Bank	Mean difference	S.D difference	t value	df	Sig.(P) value
SBI	-3.250	1.50	-4.333	3	0.011*

Source: Author's calculation. *Significant @5% level of significance

The above table shows the paired sample t-test result of SBI for the corporate governance compliance practices during pre-post merger period. From the table It can observe that the 'p' value is 0.011. Since it is lesser than 0.05, we reject the null hypothesis (Ho) at 5% level of significance, and it indicates that, the difference in the compliance scores of SBI during the pre-post merger period is statistically significant.

5.3 Comparison Corporate Governance Compliance practices of State bank of India with other public sector banks.

H0: ***There is no significant difference in the corporate governance compliance practices of SBI in pre-merger and post-merger periods compared with other public sector banks.***

5.3.1 Corporate Governance Compliance Scores of Public Sector Banks

The below table shows the overall corporate governance compliance scores of selected public sector banks. It is the combined compliance scores of the dimensions board effectiveness, audit committee, remuneration committee, risk management, shareholders' rights and information and disclosure and transparency.

Table 5.4

Corporate Governance Compliance scores of Public Sector Banks in India during pre-post merger periods.

Bank	Total Compliance scores (2014-2017)				Compliance %	Total Compliance scores (2019-2022)				Compliance %
	2014	2015	2016	2017		2019	2020	2021	2022	
SBI	41	42	44	42	84.5%	45	46	45	46	91%
BOB	39	43	46	47	87.5%	47	47	48	47	94.5%
BOI	38	40	44	43	82.5%	43	47	45	45	92%
BOM	42.5	42.5	44.5	44.5	87%	44.5	42.5	42.5	42.5	86%
Canara	41	44	46	47	89%	45	46	43	43	88.5%
Central bank	37	38	39	39	76.5%	46	46	46	40	89%
Indian bank	38	39	45	46	84%	40	43	40	44	83.5%
IOC	42	42	39	40	81.5%	42	43	40	40	82.5%
PNB	44	43	45	48	90%	48	44	44	46	91%
PSB	41	40	43	42	83%	42	46	44	43	87.5%
UCO	40	40	41	41	81%	40	39	41	41	80.5%
Union	37	37	41	41	78%	40	42	39	39	80%

Source: Author's calculation.

During the pre-merger period (2014-2017), SBI's compliance score was 84.5%. but in the post-merger period (2019-2022) compliance percentage was increased to 91%. there is an increase of 6.5%. In the post-merger phase BOM, Canara, Indian bank and UCO bank exhibited decline. The highest leap in compliance was did by the central bank of India from 76.5% (2013-2017) to 89% (2019-2022). It is a significant improvement of 12.5% within five-year span of time. The second highest leap of 9.5% in compliance was made by Bank of India from 82.5% (2014-2017) to 92% (2019-2022). Followed by bank of India, bank of Baroda improved 7% of compliance. By improving 6.5% of compliance, State bank of India secured fourth position.

By observing the above table, it is clear that during the pre-merger phase highest compliance of 90% was secured by PNB. Canara Bank was in the second place with

89% compliance and Bank of Baroda was in the third place with 87.5% compliance. In this period (2013-2017), SBI's position was fifth with 84.5% compliance. The least compliance percentage was 76.5% of central bank.

During the post-merger phase (2019-2022), highest compliance percentage was 94.5% by Bank of Baroda. In the previous phase (2014-2017) bank of Baroda was in third position. So, it is a notable improvement. With 92% compliance BOI secured second position. Punjab national bank fall into and SBI secured third position with 91% compliance. There is an improvement in SBI 's compliance. In the pre-merger phase (2014-2017), SBI was in fourth place. The least compliance percentage was 80% by Union bank. Though comparing with the pre-merger phase there is an improvement in compliance.

5.3.2 Kruskal Wallis test of Corporate Governance Compliance Scores of Public Sector Banks.

Based on the Shapiro-Wilk normality test the P value for the CG Compliance scores of public sector banks During pre-merger (2014-2017) and post-merger (2019-2022) was .023. Since the P value is less than 0.05, assume that the data is not normal, and the researcher has adopted the Kruskal Wallis test.

Table 5.5

Kruskal Wallis test of public sector banks on pre-post merger period based on corporate governance Compliance score.

Variable	Banks	Pre-merger period (2014-2017)				Post-merger period (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Corporate Governance Compliance scores	State bank of India	42.0	1.09	24.09	0.012*	45.0	1.64	33.51	0.001**
	Bank of Baroda	43.0	3.53			47.0	0.54		
	Bank of India	40.0	2.79			45.0	1.67		
	Bank of Maharashtra	42.5	1.09			42.5	1.09		
	Canara bank	44.0	2.54			45.0	1.51		
	Central bank of India	38.0	1.48			46.0	3.28		
	Indian bank	39.0	4.18			43.0	2.60		
	Indian overseas Bank	40.0	1.34			41.0	1.30		
	Punjab and Sind bank	41.0	4.03			43.0	2.00		
	Punjab national bank	44.0	1.30			46.0	2.58		
	UCO bank	40.0	0.83			41.0	1.14		
	Union bank	37.0	2.19			40.0	1.52		

** Significance at 1% level of significance. *Significant @5% level of significance.

The above table shows the Kruskal Wallis test result of corporate governance Compliance scores of the public sector banks in India during pre-merger and post-merger periods. The P value for both the pre- and post-merger period was 0.012 and 0.001 respectively. Since both the P values are lesser than 0.05, it indicates that there

is a significant difference in the corporate governance Compliance scores of selected public sector banks.

Aimed to identify if there are any significant variations between SBI and other banks in terms of corporate governance Compliance scores. In order to identify the exact variations of SBI with other public sector banks in corporate governance Compliance, the pairwise comparison test has been conducted. The relevent part of the result is present below.

Table 5.6

Pairwise Comparison test for Public Sector Banks on pre-merger and post-merger periods based on Corporate Governance Compliance scores.

Banks		Pre-merger (2014-2017)		Post-merger (2019-2022)	
		Mean Rank	Sig.(P) value	Mean rank	Sig.(P) value
SBI	Bank of Baroda	33.00	1.000	56.10	1.000
	Bank of India	22.00	1.000	38.10	1.000
	Bank of Maharashtra	34.50	1.000	28.40	1.000
	Canara bank	36.75	1.000	38.20	1.000
	Central bank of India	6.25	1.000	31.90	1.000
	Indian bank	24.88	1.000	25.20	1.000
	Indian overseas Bank	18.75	1.000	15.50	1.000
	Punjab and Sind bank	39.63	1.000	26.00	1.000
	Punjab national bank	23.13	1.000	46.30	1.000
	UCO bank	17.00	1.000	11.50	0.370
	Union bank	11.00	1.000	10.10	0.211

Source: Author’s calculation.

From the above pairwise comparison table it is clear that in both periods (2014-2017 and 2019-2022) the corporate governance Compliance score of SBI is not statistically significant with any of the banks. This implies that there is no significant difference in the overall corporate governance Compliance scores between SBI and the other banks during both periods. So, accept the null hypothesis that there is no significance difference in the corporate governance Compliance practices of SBI with other public sector banks in both pre-merger and post-merger periods.

This suggests that the corporate governance Compliance scores, compared are generally consistent across all banks in comparison to SBI in both periods.

5.4 Comparison of Corporate Governance Dimension Wise Compliance Scores of Public Sector Banks

H0: There is no significance difference in the Corporate Governance Dimensions Wise Compliance score of SBI with other Public Sector Banks in pre-merger and post-merger periods.

Table 5.7

Dimension wise Corporate Governance Compliance Percentage of Public Secor Banks.

Bank	Dimension wise Compliance % (2014-2017)							Dimension wise Compliance % (2019-2022)						
	Board effectiveness	Audit function	Risk management	Remuneration Committee	Shareholders right & information	disclosure & transparency	Average Compliance %	Board effectiveness	Audit function	Risk management	Remuneration Committee	Shareholders right & information	disclosure & transparency	Average Compliance %
SBI	73.2 %	84.4 %	80 %	80 %	95 %	96.9 %	84.5 %	78.6 %	87.5%	100 %	95 %	100 %	96.9 %	91 %
BOB	78.6 %	84.4%	80%	81%	100%	93.8%	87.5%	92.9%	84.4%	100%	90%	100%	100%	94.5%
BOI	82.1%	75%	70%	45%	100%	100%	82.5%	94.6%	78.1%	85%	70%	100%	100%	90.5%
BOM	67.9%	100%	60%	100%	100%	97.5%	87%	73.2%	96.9%	65%	75%	100%	100%	86%
Canara bank	80.4%	75%	90%	95%	100%	100%	89%	75%	84.4%	90%	90%	100%	100%	88.5%

Bank	Dimension wise Compliance % (2014-2017)							Dimension wise Compliance % (2019-2022)						
	Board effectiveness	Audit function	Risk management	Remuneration Committee	Shareholders right & information	disclosure & transparency	Average Compliance %	Board effectiveness	Audit function	Risk management	Remuneration Committee	Shareholders right & information	disclosure & transparency	Average Compliance %
Central Bank	60.7%	81.25%	80%	60%	82.5%	100%	76.5%	75%	93.8%	95%	95%	90%	100%	89%
Indian bank	76.8%	71.9%	75%	100%	87.5%	100%	84%	73.2%	78.1%	90%	75%	90%	100%	83.5%
Indian overseas bank	66.1%	87.5%	60%	70%	100%	100%	81.5%	71.4%	93.8%	75%	40%	100%	100%	82.5%
PNB	78.6%	100%	65%	95%	100%	100%	90%	80.4%	100%	75%	90%	100%	100%	91%
Punjab& sind bank	73.2%	87.5%	60%	80%	97.5 %	93.7%	83.5%	83.9%	87.5%	80%	60%	100%	100%	87.5%
UCO bank	64.3%	75%	80%	80%	94%	97.5%	81%	64.3%	68.8%	80%	80%	97.5 %	100%	80.5%
Union bank	62.5%	71.9%	60%	80%	95%	100%	78%	60.7%	81.3%	70%	85%	92.5 %	100%	80.8%

Source: Author's calculation.

The above table shows the corporate governance dimension wise Compliance percentage of public sector banks selected for this study.

The highest average compliance score during the pre-merger period was secured by PNB with 90%. The least average compliance score was 76.5% by Central bank. in the post merger phase the highest average compliance was 94.5% by BOB. The least average compliance during this period was 80.5% by UCO bank.

In the pre-merger (2014-2017) period SBI's average Compliance percentage was 84.5% and in post-merger (2019-2022) it increased to 91%. During the pre-merger period, 73.2% was the board effectiveness Compliance percentage of State Bank of India. It increased to 78.6% in the post-merger period. The Audit Function compliance score was 84.4% during pre-merger and 87.5% in post-merger. The risk management has scored perfect 100% during the post-merger phase by improving 20% from the pre-merger phase. This showcasing SBI's increased focus on risk management. The Remuneration Committee score also improved to 95% in the post-merger phase from 80% in the pre-merger phase. So, there is an improvement of 15% in the remuneration committee. SBI has consistently demonstrated exceptional performance in terms of shareholder relations, as evidenced by its perfect score of 100% in Shareholders' Rights & Information in the post-merger phase. The disclosure & transparency compliance remained consistent in both periods with 96.9%. Overall, the SBI's total Compliance percentage had the increase of 6.5% and reached 91% during the post-merger period.

In the board effectiveness dimension, During the pre-merger phase, the Bank of India (BOI) achieved the highest compliance score of 82.1%, while the Central Bank attained the least at 60.7%. Canara Bank, PNB, Bank of Baroda (BOB) and Indian Bank had the highest board effectiveness Compliance percentages of 80.4%, 78.6%,78.6% and 76.8% respectively. SBI had 73.2% compliance and attained fifth position. In the post-merger phase, Bank of India achieved the highest Compliance percentage in the dimension of board effectiveness at 94.6%, while Union Bank had the least with 60.7%. Therefore, BOI had the highest Compliance percentages in both periods.

Regarding the dimension Audit function, In the pre-merger phase, the BOM and PNB achieved 100% compliance. Punjab and Sind Bank, Indian Overseas Bank, attained 87.5% and SBI and BOB displayed Compliance scores of 84.4% respectively. Union Bank had the lowest score of 71.9% Compliance rate. In the post-merger phase, Punjab National Bank had the highest compliance rate at 100%. Bank of Maharashtra came in second with a 96.9% Compliance score. Central Bank and Indian Overseas Bank shared the third position with a 93.8% Compliance rate. UCO Bank had the lowest score with a 68.8%.

During the pre-merger phase, under the dimension of risk management, Canara Bank achieved the highest Compliance score of 90%. State Bank of India, BOB, and UCO Bank secured second place with a score of 80%. The lowest Compliance percentage was recorded by Union Bank, Punjab & Sind Bank, Indian Overseas Bank, and BOM, with a score of 60%. When looking at the post-merger period from 2019 to 2022, it's clear that banks have made significant progress in their risk management Compliances. SBI and BOB are leading the way with a perfect score of 100%. Central Bank attained second place with 95%. Canara Bank, and Indian Bank with 90% Compliance rate attained third place. BOM, on the other hand, had the lowest score with only 65% Compliance.

Under the dimension remuneration committee, in the pre-merger phase 2014-2017, Indian bank and BOM attained perfect 100% Compliance. With a 95% Compliance score, Canara Bank and PNB is there in second place. The least Compliance score was 45% by BOI. During the post-merger phase 2019 -2022, none of the banks attained 100%. By scoring 95% Compliance, SBI and Central bank attained first place. BOB, Canara and PNB are in the second place with 90% compliance. The 40% Compliance was the least scored in this phase by Indian overseas bank.

Regarding the dimension shareholder rights and information, during the pre-merger period 2014 -2017, six banks - BOB, BOI, BOM, Canara, Indian Overseas Banks and PNB - scored a perfect 100%. Punjab & Sind Bank followed closely with 97.5% scores, while SBI and Union banks came in third place with a 95% score. The central bank had the lowest Compliance rate of 82.5%. In the following post-merger period,

eight banks, including SBI, BOB, BOI, BOM, Canara, Indian Overseas PNB and Punjab & Sind Bank, scored a perfect 100%. There has been notable improvement in the shareholder rights and information dimension. The lowest Compliance rate for this period was 92% by Indian Bank and the central bank.

During the pre-merger period, all banks demonstrated excellent scores in the dimension disclosure and transparency. BOI, Canara Bank, Central Bank, Indian Bank, Indian Overseas Bank, PNB, and Union Bank all achieved perfect disclosure scores of 100%. The lowest compliance score under this dimension was 93.7% by Punjab &Sind bank. In the post-merger period 2019-2022, all banks scored 100%, except for SBI, whose score was 96.9%.

1. Board Effectiveness

H0: There is no significant difference in the Board Effectiveness dimension of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other public sector banks.

Based on the Shapiro-Wilk normality test the P value for the dimension board effectiveness of public sector banks during the periods 2014-2017 and 2019-2022 was <0.001. Since the P value is lesser than 0.05, assume that the data is not normal, and researcher has adopted Kruskal Wallis test.

Table 5.8

Kruskal Wallis test of public sector banks on pre-post merger period based on dimension board effectiveness.

Variable	Banks	Pre-merger (2014-2017)				Post-merger (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
Board Effectiveness	State bank of India	10.50	0.96	19.13	0.059***	11.00	0.00	34.38	0.001**
	Bank of Baroda	11.50	2.16			13.00	0.00		
	Bank of India	12.00	1.91			13.50	0.96		
	Bank of Maharashtra	9.50	1.15			10.50	0.50		
	Canara bank	11.50	1.71			10.50	0.58		
	Central bank of India	8.50	0.58			11.00	1.73		
	Indian bank	11.00	2.63			10.50	0.96		
	Indian overseas Bank	9.00	0.50			9.00	1.00		
	Punjab and Sind bank	10.00	0.50			12.00	0.50		
	Punjab national bank	10.50	5.80			11.00	1.26		
	UCO bank	9.00	0.00			9.00	1.15		
	Union bank	8.50	0.96			8.00	1.00		

**Significant @1% level of significance. ***Significant @10% level of significance.
Source: Author's calculation

The above table shows the Kruskal Wallis test result of the dimension board effectiveness in two phases 2014-2017 and 2019-2022. Since both the P values shows statistical significance, it indicates that there is a significant difference in the board effectiveness dimension of selected public sector banks.

The researcher is attempting to determine if SBI bank differs significantly from other banks in terms of board effectiveness. To identify any significant differences between

SBI and other public sector banks in terms of board effectiveness, the researcher conducted pairwise comparisons. The relevant part of the results is presented below.

Table 5.9

Pairwise comparison test for public sector banks on pre-merger and post-merger periods based on the dimension board effectiveness.

Banks		Pre-merger (2014-2017)		Post-merger (2019-2022)	
		Mean Rank	Sig.(P) value	Mean rank	Sig.(P) value
SBI	Bank of Baroda	31.25	1.00	43.50	1.00
	Bank of India	35.38	1.00	44.13	1.00
	Bank of Maharashtra	19.50	1.00	16.75	1.00
	Canara bank	34.25	1.00	21.00	1.00
	Central bank of India	9.50	1.00	24.38	1.00
	Indian bank	27.25	1.00	19.50	1.00
	Indian overseas Bank	18.25	1.00	18.00	1.00
	Punjab and Sind bank	33.50	1.00	28.80	1.00
	Punjab national bank	28.88	1.00	35.50	1.00
	UCO bank	15.50	1.00	8.75	1.00
	Union bank	12.25	1.00	6.13	1.00

Source: Author's calculation.

The table displays a pairwise comparison test between the State Bank of India (SBI) and other public sector banks based on board effectiveness. The test covers two distinct periods: pre-merger (2014-2017) and post-merger (2019-2022). The pairwise comparison result of the State Bank of India (SBI) with other public sector banks based on the dimension board effectiveness for both the periods reveals that the P values are consistently 1.00 for all banks in both periods. This indicates that there is no statistically significant difference in board effectiveness between SBI and the other public sector banks for both timeframes. Hence, it accepts the null hypothesis that there is no statistically significant difference in board effectiveness dimension of SBI with other public sector banks for both timeframes.

2. Audit function

H0: There is no significant difference in the Audit function dimension of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.

Based on the Shapiro-Wilk normality test the P value for the dimension Audit function of public sector banks during the periods 2014-2017 and 2019-2022 was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 5.10

Kruskal Wallis test of public sector banks on pre-post merger period based on the dimension audit function.

Variable	Banks	Pre-merger period (2014-2017)				Post-merger period (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
Audit function	State bank of India	7.00	0.50	41.39	0.001**	7.00	0.00	42.08	0.001**
	Bank of Baroda	7.00	0.50			7.00	0.50		
	Bank of India	6.00	0.00			6.00	0.50		
	Bank of Maharashtra	8.00	0.00			8.00	0.50		
	Canara bank	6.00	0.00			7.00	0.50		
	Central bank of India	6.50	0.58			7.50	0.58		
	Indian bank	6.00	0.50			6.00	0.50		
	Indian overseas Bank	7.00	0.00			7.50	0.58		
	Punjab and Sind bank	7.00	0.00			7.00	0.00		
	Punjab national bank	8.00	0.00			8.00	0.00		
	UCO bank	6.00	0.00			5.50	0.58		
	Union bank	5.50	0.96			6.50	0.58		

** Significance at 1% level of significance

The above table shows the Kruskal Wallis test result of the dimension audit function in two phases pre-merger and post-merger. The P value for both the periods were 0.001. Both P values shows indicates that there is a significant difference in the audit function dimension of selected public sector banks.

In order to identify if there are any significant variations between SBI and other public sector banks in terms of audit function dimension, researcher has conducted pairwise comparison. The relevent part of the result is present below.

Table 5.11

Pairwise comparison test for public sector banks on pre-merger and post-merger periods based on the dimension audit function.

	Banks	Pre-merger (2014-2017)		Post-merger (2019-2022)	
		Mean Rank	Sig.(P) value	Mean rank	Sig.(P) value
SBI	Bank of Baroda	27.38	1.000	21.63	1.000
	Bank of India	13.50	1.000	12.88	1.000
	Bank of Maharashtra	44.50	1.000	38.75	1.000
	Canara bank	13.50	1.000	21.63	1.000
	Central bank of India	22.75	1.000	34.50	1.000
	Indian bank	10.63	1.000	12.88	1.000
	Indian overseas Bank	32.00	1.000	34.50	1.000
	Punjab and Sind bank	44.50	1.000	43.00	1.000
	Punjab national bank	32.00	1.000	26.00	1.000
	UCO bank	13.50	1.000	5.00	1.000
	Union bank	12.38	1.000	17.25	1.000

Source: Author's calculation.

After conducting a pairwise comparison between the State Bank of India (SBI) and other public sector banks for both the periods, it was found that all banks had P values of 1.000 in both periods. This indicates that there was no statistically significant difference in the audit function dimension between SBI and the other public sector banks during the observed timeframes.

3. Risk Management

H0: There is no significant difference in the Risk management dimension of SBI during the pre-merger (2014-2017) and post-merger (2019-2022) phases with other selected public sector banks.

Based on the Shapiro-Wilk normality test the P value for the dimension Risk management of public sector banks during the periods 2014-2017 and 2019-2022 was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 5.12

Kruskal Wallis test of public sector banks on pre-post merger period based on the dimension Risk management.

Variable	Banks	Pre-merger period (2014-2017)				Post-merger period (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
Risk management	State bank of India	4.0	0.0	34.48	0.001**	5.0	0.0	32.65	0.001**
	Bank of Baroda	4.0	0.0			5.0	0.0		
	Bank of India	3.5	0.6			4.0	0.5		
	Bank of Maharashtra	3.0	0.0			3.0	0.5		
	Canara bank	4.5	0.6			4.5	0.6		
	Central bank of India	4.0	0.0			5.0	0.5		

Variable	Banks	Pre-merger period (2014-2017)				Post-merger period (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
	Indian bank	3.5	1.0			4.5	0.6		
	Indian overseas Bank	3.0	0.0			4.0	0.5		
	Punjab and Sind bank	3.0	0.0			4.0	0.0		
	Punjab national bank	3.0	0.5			4.0	0.5		
	UCO bank	4.0	0.0			4.0	0.0		
	Union bank	3.0	0.0			3.5	0.6		

** Significance at 1% level of significance

The table above displays the results of the Kruskal Wallis test for the risk management dimension in two phases. The P-values for both periods were 0. 001.Both the P-values suggests that there is a significant difference in the risk management dimension of selected public sector banks.

To determine if there are any significant variations between SBI and other public sector banks in terms of risk management dimension, the researcher conducted pairwise comparisons. The relevant part of the results is presented below.

Table 5.13

Pairwise comparison test for public sector banks on pre-merger and post-merger periods based on the dimension risk management.

	Banks	Pre-merger (2014-2017)		Post-merger (2019-2022)	
		Mean Rank	Sig.(P) value	Mean rank	Sig.(P) value
SBI	Bank of Baroda	34.50	1.000	40.50.	1.000
	Bank of India	23.25	1.000	25.13	1.000
	Bank of Maharashtra	12.00	0.709	8.00	0.019*
	Canara bank	40.75	1.000	30.25	1.000
	Central bank of India	34.50	1.000	35.38	1.000
	Indian bank	26.38	1.000	30.25	1.000
	Indian overseas Bank	12.00	0.709	16.00	0.412
	Punjab and Sind bank	17.63	1.000	16.00	0.412
	Punjab national bank	12.00	0.709	20.00	0.412
	UCO bank	34.50	1.000	20.00	1.000
	Union bank	12.00	0.709	12.00	0.097***

*Significance @ 5% level of significance. ***Significance @ 10% level of significance.
Source: Author's calculation.

During the pre-merger period none of the banks showed statistical significance. In the post-merger phase, BOM and Union bank shows statistical significance with SBI regarding the dimension risk management. From the mean ranks it is clear that both these banks have very low mean rank compared to that of SBI. Hence comparing with SBI, these banks have significantly low risk management.

4. Remuneration Committee

H0: There is no significant difference in the Remuneration Committee dimension of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.

Based on the Shapiro-Wilk normality test the P value for the dimension Remuneration committee of public sector banks from 2014- 2017 and to 2019-2022 was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 5.14

Kruskal Wallis test of public sector banks on pre-post merger period based on the dimension Remuneration committee.

Variable	Banks	Pre-merger period (2014-2017)				Post-merger period (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
Remuneration Committee	State bank of India	4.0	0.0	33.83	0.001**	4.00	0.00	18.75	0.066***
	Bank of Baroda	4.5	0.6			5.00	0.58		
	Bank of India	2.0	0.5			4.00	1.73		
	Bank of Maharashtra	5.0	0.0			4.00	0.96		
	Canara bank	5.0	0.5			4.00	0.58		
	Central bank of India	3.0	0.0			4.00	0.50		
	Indian bank	5.0	0.0			5.00	1.89		
	Indian overseas Bank	3.5	1.7			2.00	0.00		
	Punjab and Sind bank	4.0	0.0			3.00	1.63		
	Punjab national bank	5.0	0.5			5.00	0.58		
	UCO bank	4.0	0.0			4.00	0.00		
	Union bank	4.0	0.0			4.00	0.50		

** Significance at 1% level of significance. ***Significance @ 10% level of significance.

The table above displays the results of the Kruskal Wallis test for the dimension remuneration committee in two phases: 2014-2017 and 2019-2022. The P-values for both periods suggests that there is a significant difference in the remuneration committee dimension of selected public sector banks.

To determine if there are any significant variations between SBI and other public sector banks in terms of remuneration committee dimension, the researcher conducted pairwise comparisons. The relevant part of the results is presented below.

Table 5.15

Pairwise comparison test for public sector banks on pre-merger and post-merger periods based on the dimension remuneration committee.

Banks		Pre-merger (2014-2017)		Post-merger (2019-2022)	
		Mean Rank	Sig.(P) value	Mean rank	Sig.(P) value
SBI	Bank of Baroda	30.00	1.000	30.25	1.000
	Bank of India	4.25	1.000	20.88	1.000
	Bank of Maharashtra	39.50	1.000	19.88	1.000
	Canara bank	34.75	1.000	30.25	1.000
	Central bank of India	8.00	1.000	34.88	1.000
	Indian bank	39.50	1.000	25.50	1.000
	Indian overseas Bank	21.25	1.000	5.50	0.142
	Punjab and Sind bank	34.75	1.000	30.25	1.000
	Punjab national bank	20.50	1.000	15.13	1.000
	UCO bank	20.50	1.000	21.00	1.000
	Union bank	20.50	1.000	25.63	1.000

Source: Author's calculation.

During the pre-merger period, none of the banks were statistically significant with remuneration committee dimension of SBI. Indicates that all banks had similar remuneration committee compliances that of SBI.

In the post-merger phase also, none of the banks were significant with SBI regarding remuneration committee compliance. Indicates that all banks had similar performance that of SBI. Hence can conclude that merger happened in SBI didn't give any significant advantage to SBI compared with other banks regarding this dimension.

5. Shareholders' Rights & Information

H0: There is no significant difference in the Shareholder's Rights & Information dimension of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.

Based on the Shapiro-Wilk normality test the P value for the dimension shareholders' rights and information of public sector banks from 2014- 2017 and to 2019-2022 was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 5.16

Kruskal Wallis test of public sector banks on pre-post merger period based on the dimension shareholders rights &information.

Variable	Banks	Pre-merger period (2014-2017)				Post-merger period (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
Shareholders' right &information	State bank of India	9.5	0.6	32.37	0.001**	10.00	0.00	39.16	0.001**
	Bank of Baroda	10.0	0.0			10.00	0.00		
	Bank of India	10.0	0.0			10.00	0.00		
	Bank of Maharashtra	10.0	0.0			10.00	0.00		
	Canara bank	10.0	0.0			10.00	0.00		
	Central bank of India	8.0	0.5			9.00	0.00		
	Indian bank	9.0	0.5			9.00	0.00		
	Indian overseas Bank	10.0	0.0			10.00	0.00		
	Punjab and Sind bank	10.0	0.5			10.00	0.00		
	Punjab national bank	10.0	0.0			10.00	0.00		
	UCO bank	9.5	0.6			10.00	0.50		
	Union bank	9.5	0.6			9.00	0.50		

** Significance at 1% level of significance

The table above shows the results of the Kruskal Wallis test conducted on the shareholders' rights and information dimension for two time periods. The P-values for both time periods were 0.001, both P-values implies that there is a significant

difference in the shareholders' right and information dimension among the selected public sector banks.

To investigate if there are any notable differences between SBI and other public sector banks in terms of shareholders rights and information dimension, the researcher carried out pairwise comparisons, which are summarized below.

Table 5.17

Pairwise comparison test for public sector banks on pre-merger and post-merger periods based on the dimension shareholders rights & information.

Banks		Pre-merger period (2014-2017)		Post-merger period (2019-2022)	
		Mean Rank	Sig.(P) value	Mean rank	Sig.(P) value
SBI	Bank of Baroda	32.00	1.00	30.50	1.00
	Bank of India	32.00	1.00	30.50	1.00
	Bank of Maharashtra	32.00	1.00	30.50	1.00
	Canara bank	32.00	1.00	30.50	1.00
	Central bank of India	4.38	1.00	6.50	0.81
	Indian bank	8.13	1.00	6.50	0.81
	Indian overseas Bank	32.00	1.00	30.50	1.00
	Punjab and Sind bank	32.00	1.00	30.50	1.00
	Punjab national bank	26.50	1.00	30.50	1.00
	UCO bank	21.00	1.00	24.50	1.00
	Union bank	21.00	1.00	12.50	1.00

Source: Author's calculation.

None of the public sector banks show any significant difference in terms of shareholders' rights and information when compared to SBI in both periods. However, the Central Bank of India and Indian Bank in the 2019-2022 period had some variation from SBI, but it wasn't statistically significant. Accepts the null hypothesis that, there

is no significant difference in the Shareholders' rights & information dimension of SBI during the pre-post merger periods when compared with other public sector banks. Indicates that all public sector banks possess similar performance to that of SBI in both periods.

6. Disclosure & Transparency

H0: There is no significant difference in the Disclosure & Transparency dimension of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.

Based on the Shapiro-Wilk normality test the P value for the dimension Compliance and transparency of public sector banks from 2014-2017 and 2019- 2022 was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 5.18

Kruskal Wallis test of public sector banks on pre-post merger period based on the dimension Disclosure and Transparency.

Variable	Banks	Pre-merger period (2014-2017)				Post-merger period (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
Disclosure & Transparency	State bank of India	8.0	0.5			8.0	0.5		
	Bank of Baroda	7.5	0.6			8.0	0.0		
	Bank of India	8.0	0.0			8.0	0.0		
	Bank of Maharashtra	8.0	0.0	18.14	0.078***	8.0	0.0	11.00	0.443
	Canara bank	8.0	0.0			8.0	0.0		
	Central bank of India	8.0	0.0			8.0	0.0		
	Indian bank	8.0	0.0			8.0	0.0		

Variable	Banks	Pre-merger period (2014-2017)				Post-merger period (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
	Indian overseas Bank	8.0	0.0			8.0	0.0		
	Punjab and Sind bank	7.5	0.6			8.0	0.0		
	Punjab national bank	8.0	0.0			8.0	0.0		
	UCO bank	8.0	0.0			8.0	0.0		
	Union bank	8.0	0.0			8.0	0.0		

*** Significance at 10% level of significance

The table above shows the results of the Kruskal Wallis test conducted on the disclosure and transparency_dimension for two time periods. The P-values for both time periods were 0.078 and 0.443. only the P value during pre-merger period shows statistical significance. This implies that there is a significant difference in the disclosure and transparency dimension among the selected public sector banks during the pre-merger phase. In the post-merger phase all banks possessed similar performance regarding the dimension disclosure &transparency.

To investigate if there are any notable differences between SBI and other public sector banks in terms of disclosure and transparency dimensions, the researcher carried out pairwise comparisons, which are summarized below.

Table 5.19

Pairwise comparison test for public sector banks on pre-merger and post-merger periods based on the dimension disclosure and transparency.

Banks		Pre-merger period (2014-2017)	
		Mean Rank	Sig.(P) value
SBI	Bank of Baroda	15.00	1.00
	Bank of India	27.00	1.00
	Bank of Maharashtra	27.00	1.00
	Canara bank	27.00	1.00
	Central bank of India	27.00	1.00
	Indian bank	27.00	1.00
	Indian overseas Bank	27.00	1.00
	Punjab and Sind bank	27.00	1.00
	Punjab national bank	15.00	1.00
	UCO bank	27.00	1.00
	Union bank	27.00	1.00

Source: Author's calculation.

From the pairwise comparison test it is clear that none of the bank's performance regarding disclosure and transparency is statistically significant with that of SBI. Indicates that all public sector banks have similar compliance regarding disclosure and transparency.

Hence, accepts the null hypothesis that, there is no significant difference in the disclosure& transparency dimension of SBI the pre- merger (2014-2017) and post-merger (2019-2022) phases when comparing with other public sector banks**.**

CHAPTER 6

STATE BANK OF INDIA MERGER 2017 AND OVERALL CORPORATE PERFORMANCE

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6.1 Introduction

Mergers and acquisitions can have a significant impact on various aspects of corporate performance, from financial metrics to operational efficiency and market positioning. Consolidating resources and eliminating duplicate departments or operations can increase operational efficiency and cost savings, resulting in lower costs and potentially higher profits. Mergers can also enhance a firm's market share, providing a competitive advantage and enabling the firm to set prices and terms that favor its business objectives. Successful mergers can boost key financial indicators, while unsuccessful ones can harm financial performance, leading to losses and decreased shareholder value. Combining different expertise, technologies, and intellectual properties can facilitate innovation and new product development. Merging with a company in a different geography or sector can diversify business risk. While a merger can lead to job losses in the short term, it can also result in a larger, more diverse talent pool, which can benefit the firm in the long run. A merger can bring significant changes in corporate culture, which, if well-managed, can create a more conducive work environment and improve performance. However, a poorly managed merger can lead to conflicts and reduced performance, which can harm the company's reputation.

This chapter will analyze how the merger of SBI has affected its corporate performance. Moreover, we will compare SBI's corporate performance with that of other public sector Banks with the help of balanced score card method. Under the balanced scorecard method, five perspectives were used to analyze corporate performance. The financial perspective, customer perspective, learning and growth perspective, internal business process perspective and social and environmental

perspective of the balanced score card method give a balanced and comprehensive view of the corporation's performance that can be achieved.

H0: There is no significant changes in the overall corporate performance of SBI during pre- post merger periods.

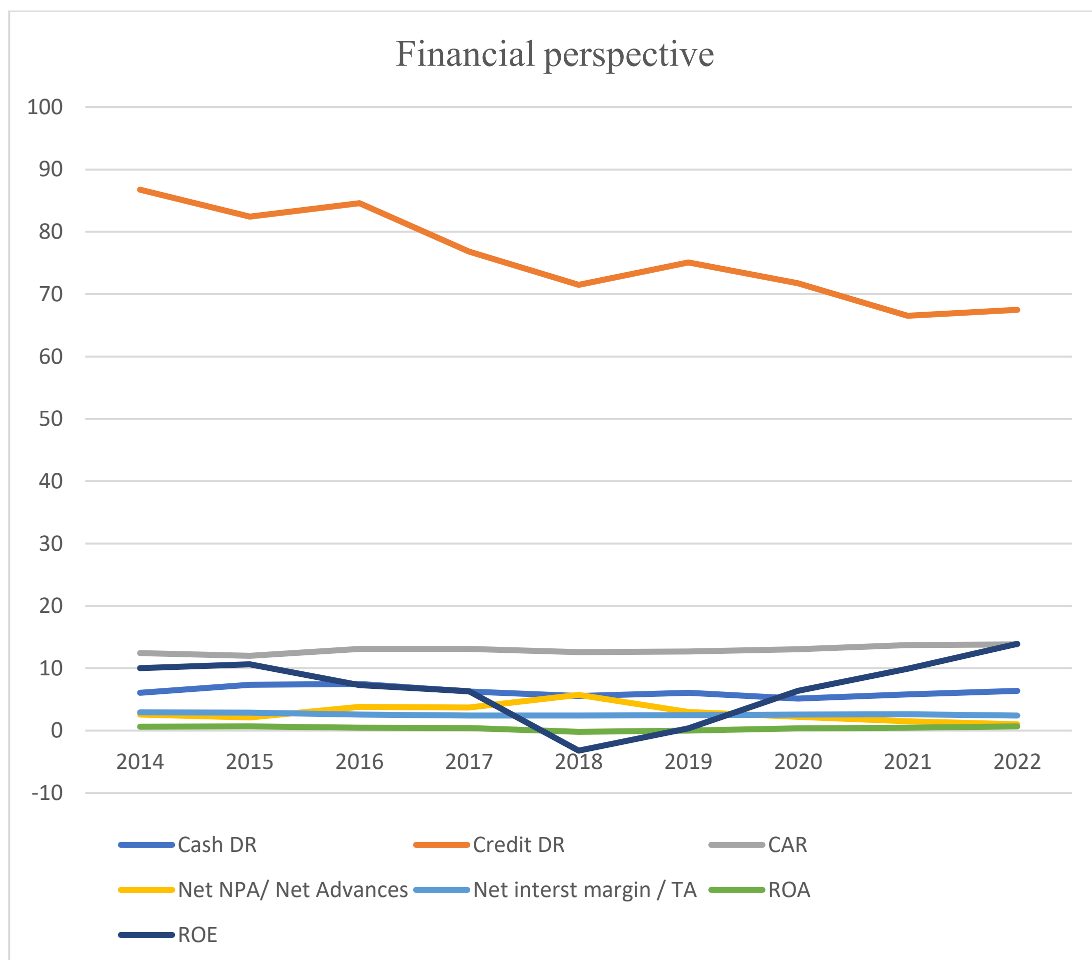
6.2 State Bank of India Merger 2017 on Overall Corporate Performance.

1) Financial perspective

H0: There is no significant difference in the financial perspective of SBI during pre- post merger periods.

Figure 6.1

Financial perspective fluctuations of SBI from 2014-2022.



Source: Author’s calculations.

The figure shows the fluctuations of the variables from the financial perspective. This chart shows the merger year data to understand the intensity of the variations. But for analysis excluded the merger year 2018. It is visible that all variables are improving or stabilizing since 2019, immediately after the merger impact on 2018.

Table 6.1

Descriptive Statistics of State Bank of India on pre- post merger periods based on the Financial Perspective of Balanced Score Card.

Perspective	variables	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Mean	S. D	MIN	MAX	Mean	S.D	MIN	MAX
Financial perspective	Cash deposit ratio	6.80	0.72	6.09 (2014)	7.49 (2017)	5.85	0.53	5.14 (2020)	6.37 (2022)
	Credit deposit ratio	82.65	4.26	76.83 (2017)	86.76 (2014)	70.21	3.96	66.54 (2021)	75.08 (2019)
	CAR	12.67	0.547	12 (2015)	13.12 (2016)	13.34	0.54	12.72 (2019)	13.83 (2022)
	Net NPA to advances	3.05	0.84	2.12 (2015)	3.81 (2016)	1.94	0.87	1.09 (2022)	3.01 (2019)
	NIM	2.71	0.23	2.44 (2017)	2.93 (2014)	2.52	0.09	2.42 (2022)	2.61 (2021)
	ROA	0.55	0.13	0.41 (2017)	0.68 (2015)	0.39	0.27	0.02 (2019)	0.67 (2022)
	ROE	8.57	2.09	6.31 (2017)	10.62 (2015)	7.66	5.74	0.39 (2019)	13.92 (2022)

Source: Author's Calculation

Cash deposit ratio

The average cash deposit ratio of pre-merger period was 6.80% and in post- merger period it diminished to 5.85%. In the post -merger period the cash deposit ratio was minimum in the year 2020 and it reached maximum to 6.37% in the year 2022. While comparing the pre-post merger mean of cash deposit ratio, it is clear that in the post-merger stage there is a diminishing trend. In the post-merger period, the standard

deviation has been reduced to 0.53 from 0.72. It indicates the consistency of cash deposit ratio in post-merger stage.

To analyze whether the mean differences of cash deposit ratio in the pre- post merger periods is statistically significant, the researcher has conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for cash deposit ratio was 0.472. Since it is greater than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.2

Paired Sample t-test result of SBI for the variable Cash deposit ratio.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Cash deposit ratio	0.952	1.17	1.61	3	0.204

Source: Author's calculation

The Paired Sample t-test result of SBI for the variable cash deposit ratio explains that the 'p' value is 0.204. Since it is higher than 0.05, we failed to reject the null hypothesis. Hence, there is no significant difference in the cash deposit ratio of SBI during the pre- post merger periods. Therefore, the mean differences of the cash deposit ratio of SBI during the pre- post merger periods is statistically insignificant.

Credit deposit ratio

Credit deposit ratio is one of the important indicators to measure the Bank's financial health. In the pre-merger stage, the average CD ratio was 82.65% and it diminished to 70.21% in the post-merger stage. In the pre-merger stage, the credit deposit ratio hit the maximum 86.76% in the year 2014. In the post-merger stage, the credit deposit ratio was minimum in the year 2021 as 66.54% and reached maximum to 75.08 % in the year 2019. Higher credit deposit ratio indicates the efficient utilization of funds by the Banks. Over the years there is a diminishing trend for credit deposit ratio.

To analyze whether the mean differences of credit deposit ratio in the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for credit

deposit ratio was 0.570. Since it is greater than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.3

Paired Sample t-test result of SBI for the variable Credit deposit ratio.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Credit deposit ratio	12.44	3.84	6.47	3	0.007**

Source: Author's calculation. **Significance @ 1%.

The Paired Sample t-test result of SBI for the variable credit deposit ratio indicates that the 'p' value is 0.007 and significant at 1%. Hence, we reject the null hypothesis (Ho) that there is no significant difference in the credit deposit ratio of SBI during the pre- post merger periods at 1% level of significance. Therefore, the mean differences in the credit deposit ratio of SBI during the pre- post merger periods is statistically significant.

Capital adequacy ratio (CAR)

While observing the capital adequacy ratio of SBI, we can interpret that they have maintained a good capital adequacy ratio accordance with the various governmental norms. During the study period SBI has maintained CAR in-between 12% to 14%.

To analyze whether the mean differences of Capital adequacy ratio (CAR) of SBI during the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for capital adequacy ratio was 0.737. Since it is greater than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.4

Paired Sample t-test result of SBI for the variable Credit deposit ratio.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Capital adequacy ratio (CAR)	-0.67	0.32	-4.17	3	0.025*

Source: Author's calculation *Significant @ 5%.

The Paired Sample t-test result of SBI for the variable Capital adequacy ratio indicates that the 'p' value is 0.025. Since the P value is lesser than conventional thresholds, we reject the null hypothesis at 5% significance level. Hence, there is a significant difference in the credit deposit ratio of SBI during the pre- post merger periods. Therefore, the mean differences in the capital adequacy ratio of SBI during the pre-post merger periods is statistically significant.

NPA to Net advances ratio

While observing the net NPA to advances ratio there is reduction in the post-merger stage. The NPA ratio was 3.05% in the pre-merger stage, and it reduced to 1.94% in the post-merger stage. During the study period the net NPA to advances ratio of SBI has reached the highest point that 3.81 % in the year 2016. After the merger, in 2019 the NPA was 3.01% and it decreased to 1.09% in 2022.

To analyze whether the mean differences of Net NPA to Net advances ratio of SBI during the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for Net NPA to Net advances ratio was 0.791. Since it is greater than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.5

Paired Sample t-test result of SBI for the variable Net NPA to Net advances ratio.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Net NPA to Net advances ratio	1.11	1.61	1.37	3	0.262

Source: Author's calculation

The Paired Sample t-test result of SBI for the variable Net NPA to Net advances ratio shows that the 'p' value is 0.262. Since it is higher than 0.05, we failed to reject the null hypothesis that there is no significant difference in the Net NPA to Net advances ratio of SBI during the pre- post merger periods. Therefore, the mean differences in the Net NPA to Net advances ratio of SBI during the pre- post merger periods is statistically insignificant.

Net interest margin (NIM)

The net interest margin (NIM) of state Bank of India shows a declining trend during the post- merger period. The average NIM for pre-merger stage was 2.71% and it declined to 2.52% in the post-merger period. In the pre-merger period, the higher NIM was gained as 2.93 %in the year 2014 and in the post-merger period the higher NIM was 2.61 in 2021. So, it is visible that there is a diminishing trend in NIM in the post-merger period.

To analyze whether the mean differences of Net interest margin (NIM) ratio of SBI during the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for NIM to Total assets ratio was 0.164. Since it is greater than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.6

Paired Sample t-test result of SBI for the variable Net Interest Margin (NIM) to Total assets ratio.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Net Interest Margin (NIM) ratio	0.187	0.220	1.69	4	0.188

Source: Author's calculation.

The Paired Sample t-test result of SBI for the variable Net interest margin ratio indicates that the 'p' value is 0.188. I t is higher than the significance levels. Hence, failed reject the null hypothesis (Ho) that there is no significant difference in the Net interest margin ratio of SBI during the pre- post merger periods. Therefore, the mean differences in the Net interest margin of SBI during the pre- post merger periods is statistically insignificant.

Return on asset (ROA)

In the pre-merger stage, the mean value for ROA was 0.55 and in the post-merger stage it reduced to 0.39. during the study period the ROA was maximum at 0.68% in the year 2015 and it went to the minimum at -0.02 in the year 2019. So, while analyzing the ROA it is very clear that there is a sudden fall in the ratios in the year 2019. It is mainly because of the merging of SBI with its associates in the financial year 2017-2018.

In the year 2019 the ROA has reduced to 0.02% from 0.41% in 2017. It is because of the merger that happened between SBI and its associates in the financial year 2017-2018. In 2019 the ROA of SBI improved to 0.02 %. In 2022, after several years the ROA of SBI reached 0.67%. so, in the post-merger stage there is a gradual improvement in the ROA of state Bank of India.

To analyze whether the mean differences of Return on assets (ROA) of SBI during the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for ROA was 0.531. Since it is greater than 0.127, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.7

Paired Sample t-test result of SBI for the variable Return on Assets (ROA).

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Return on asset (ROA)	0.16	0.38	0.840	3	0.46

Source: Author's calculation

The Paired Sample t-test result of SBI for the variable Return on assets (ROA) indicates that the 'p' value is 0.46. Since it is higher than the significance levels, we failed to reject the null hypothesis (Ho) that there is no significant difference in the Return on Assets (ROA) of SBI during the pre- post merger periods. Therefore, the mean differences in the ROA of SBI during the pre- post merger periods is statistically insignificant.

Return on equity (ROE)

During the study period ROE hit maximum of 13.92% in the year 2022. as a result of merger in the year 2019 the ROE of SBI went to the least during the study period 0.39%. in the post-merger period there was S.D of 5.74. Indicates the higher fluctuations in ROE during the post-merger.

To analyze whether the mean differences of Return on Equity (ROE) of SBI during the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for ROA was 0.620. Since it is greater than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.8

Paired Sample t-test result of SBI for the variable Return on Equity (ROE).

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Return on Equity (ROE)	0.90	7.57	0.23	3	0.82

Source: Author's calculation

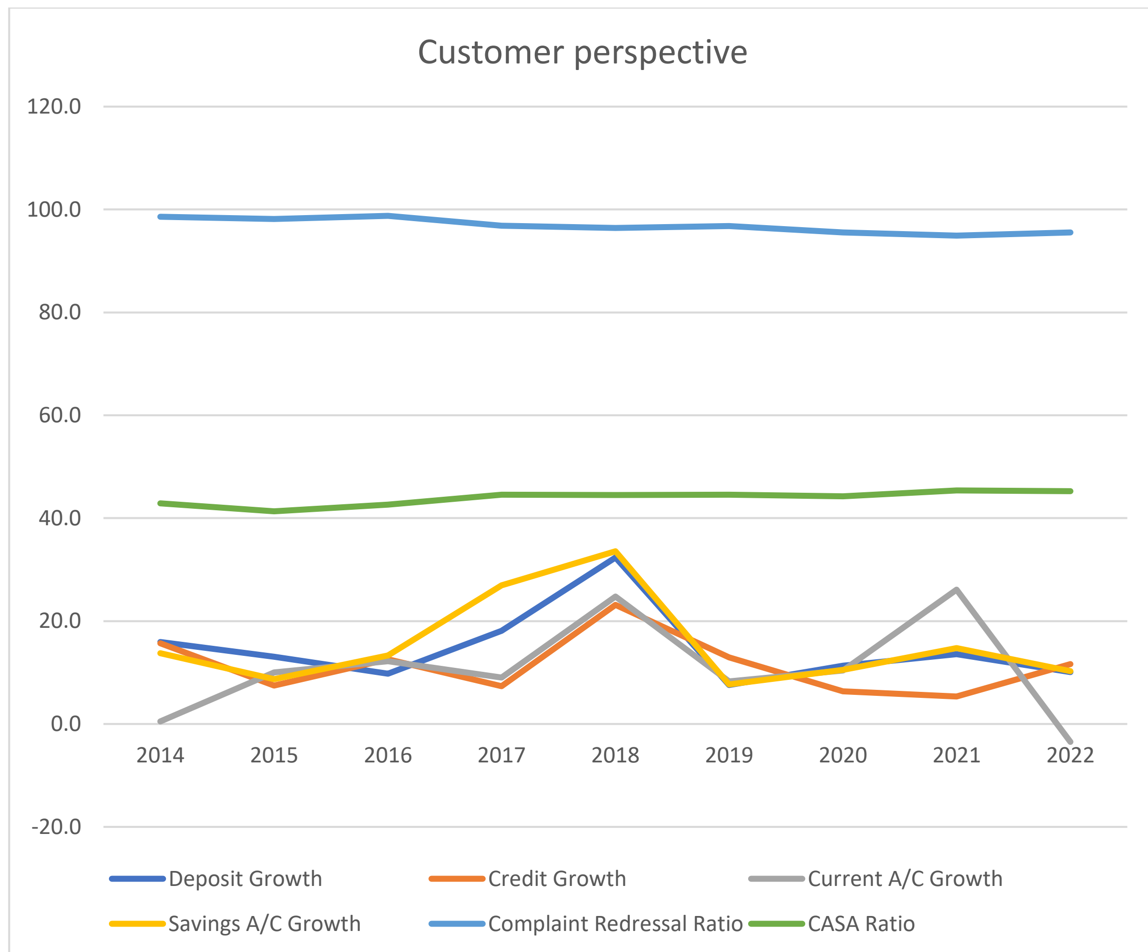
The Paired Sample t-test result of SBI for the variable Return on Equity (ROE) explains that the ‘p’ value is 0.82. Since it is higher than significance levels, we failed to reject the null hypothesis (Ho) that there is no significant difference in the Return on Equity (ROE) of SBI during the pre- post merger periods. Therefore, the mean difference in the ROE of SBI during the pre- post merger periods is statistically insignificant.

Customer Perspective

H0: There is no significant difference in the customer perspective of SBI during pre- post merger periods.

Figure 6.2

Customer perspective fluctuations of SBI from 2014-2022.



Source: Author’s Calculation.

The figure shows the fluctuations of the variables from the Customer perspective. This chart shows the merger year data to understand the intensity of the variations. But for analysis excluded the merger year 2018.

Table 6.9

Descriptive statistics of State Bank of India on pre- post merger periods based on the Customer Perspective of Balanced Score Card.

Perspective	variables	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Mean	S. D	MIN	MAX	Mean	S. D	MIN	MAX
Customer perspective	Deposit growth	14.23	3.63	9.76 (2016)	18.14 (2017)	10.63	2.50	7.58 (2019)	13.56 (2021)
	Credit growth	10.77	4.10	7.34 (2017)	15.70 (2014)	9.08	3.78	5.34 (2021)	12.97 (2019)
	Savings a/c growth	15.70	7.86	8.69 (2015)	26.97 (2017)	10.81	2.93	7.69 (2019)	14.77 (2021)
	Current a/c growth	7.94	5.14	0.49 (2014)	12.23 (2016)	10.33	12.17	-3.48 (2022)	26.11 (2021)
	CASA ratio	42.86	1.33	41.34 (2015)	44.57 (2017)	44.87	0.56	44.23 (2020)	45.40 (2021)
	Complaint redressal ratio	98.10	0.85	96.88 (2017)	98.77 (2016)	95.70	0.77	94.93 (2021)	96.76 (2019)

Source: Author's calculation.

The above table shows the descriptive statistics of state Bank of India based on the customer perspective variable of balanced score card method.

Deposit growth

By observing the growth of deposits in SBI, during the post-merger period there is a decreasing trend. In the pre-merger period, the mean was 14.23% and it decreased to 10.63% in the post-merger period. In the post-merger period highest deposit growth of 13.56% in the year 2021 and the deposit growth was very least in the year 2019 with 7.58%. During the pre-merger period the deposit growth was at its peak in the year 2017 by attaining 18.14% growth.

To analyze whether the differences of Deposit growth of SBI during the pre- post merger periods is statistically significant, conducted Wilcoxon signed rank test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for Deposit growth was 0.937. Since it is higher than 0.05, we assumed that the data is normal and choose the parametric Paired Sample t-test.

Table 6.10

Paired Sample t test result of SBI for the variable Deposit growth.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Deposit growth	3.59	5.80	1.23	3	0.30

Source: Author's calculation

The Paired Sample t-test result of SBI for the variable deposit growth indicates that the mean difference is 3.59. The obtained 'p' value is 0.30. since the 'p' value is higher than significance levels, failed to reject the null hypothesis that there is no significant difference in the deposit growth of SBI during the pre- post merger periods. Therefore, we retain the null hypothesis.

Credit growth

During the post- merger period there is a slight reduction in the growth of credit of SBI. In the pre-merger period, the average credit growth was 10.77% and in the post-merger period the growth of credit was slightly reduced to 9.08%. In the post-merger period, the standard deviation is lower than the pre-merger stage. So, it can be interpreted that there is no higher fluctuations in the credit growth in the post- merger stage when compared with pre-merger stage. During post-merger period credit growth was maximum in the year 2019 with 12.97 % and was least in the year 2021 with 5.34%.

To analyze whether the mean differences of Credit growth of SBI during the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for credit growth was 0.381. Since it is greater than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.11

Paired Sample t-test result of SBI for the variable Credit growth.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Credit growth	1.69	4.75	0.71	3	0.52

Source: Author's calculation

The Paired Sample t-test result of SBI for the variable Credit growth indicates that the 'p' value is 0.52. Since it is higher than the significance levels, we failed to reject the null hypothesis that there is no significant difference in the Deposit growth of SBI during the pre- post merger periods. Therefore, the mean difference in the credit growth of SBI during the pre- post merger periods is statistically insignificant.

Savings account growth

By observing the growth of savings account of SBI during the post-merger period there is a decreasing trend. In the pre-merger period, the mean value was 15.70% and it decreased to 10.81% in the post-merger period. In the post-merger period highest savings account growth of 14.77% was happened in the year 2021 and the savings account growth was very least in the year 2019 with 7.69%. During the pre-merger period the savings account growth was at its peak in the year 2017 by attaining 26.97% growth.

To analyze whether the differences of savings account growth of SBI during the pre-post merger periods is statistically significant, conducted Wilcoxon signed rank test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for savings account growth was 0.026. Since it is lesser than 0.05, we assumed that the data is not normal and choose the non-parametric Wilcoxon signed rank test.

Table 6.12

Wilcoxon signed rank test result of SBI for the variable Deposit growth.

Variable	Median difference	Standard error	Z value	N	Sig.(P) value
Savings account growth	0	2.73	3.00	4	0.46

Source: Author's calculation

The Wilcoxon signed rank test result of SBI for variable savings account growth explains the median differences between pre-post savings account growth are equal to 0. The obtained ‘p’ value is 0.46. since the ‘p’ value is higher than the significance levels, failed to reject the null hypothesis(H0) that there is no significant difference in the savings account growth of SBI during the pre- post merger periods. Therefore, we retain the null hypothesis.

Current account growth

While observing the current account of SBI there is a positive growth in the post-merger stage. In the pre-merger period, the mean value was 7.94% and it increased to 10.33% in the post-merger stage. During the study period current account growth of SBI was maximum in the year 2021 and it was 26.11% growth. The current account fluctuations of SBI were more frequent during the post-merger than pre-merger and it is visible from the increased standard deviation in the post-merger period.

To analyze whether the mean differences of Current account growth of SBI during the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for current account growth was 0.349. Since it is greater than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.13

Paired Sample t-test result of SBI for the variable current account growth.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Current account growth	-2.38	11.35	-0.42	3	0.70

Source: Author’s calculation

The Paired Sample t-test result of SBI for the variable Current account growth shows that the ‘p’ value is 0.70. Since it is higher than the significance levels, we failed to reject the null hypothesis that there is no significant difference in the current account growth of SBI during the pre- post merger periods. Therefore, the mean differences in

the current account growth of SBI during the pre- post merger periods is not statistically significant.

CASA ratio

The table no has given the details about CASA ratio. CASA ratio explains about the contribution of current account and savings accounts on total Bank deposits. From the above table we can interpret the fluctuations of CASA ratio of SBI on pre- post merger periods. During the pre-merger period the mean value was 42.86% and in the post-merger period it increased to 44.87%. In the post-merger period, the fluctuations of CASA ratio has reduced and it became more stable and it is visible from the reduced standard deviation in the post-merger period.

To analyze whether the mean differences of CASA ratio of SBI during the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for CASA ratio was 0.345. Since it is higher than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.14

Paired Sample t-test result of SBI for the variable CASA ratio.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
CASA ratio	-2.01	1.02	-3.90	3	0.03*

*Significance @5%
Source: Author's calculation

The Paired Sample t-test result of SBI for the variable CASA ratio indicates that the 'p' value is 0.03. It is significant at 5 % level of significance. We reject the null hypothesis that there is no significant difference in the CASA ratio of SBI during the pre- post merger periods at 5 % level of significance. Therefore, the mean differences in the CASA ratio of SBI during the pre- post merger periods is statistically significant.

Complaint redressal ratio

From the above table no it can be observed that there is reduction in the complaint redressal ratio of SBI during the post-merger stage. The mean value of complaint redressal during pre-merger period was 98.10% and it reduced to 95.70% in post-merger period. But there is no huge difference in the standard deviation on both pre-post merger periods. During the study period complaint redressal was very least in the year 2021 and it was 94.93%. Highest complaint redressal ratio during the study period was 98.77 % in the year 2016.

To analyze whether the mean differences of complaint redressal ratio of SBI during the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for complaint redressal ratio was 0.355. Since it is higher than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.15

Paired Sample t-test result of SBI for the variable complaint redressal ratio.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Complaint redressal ratio	2.39	1.09	4.36	3	0.02*

Source: Author's calculation *Significant @ 5%.

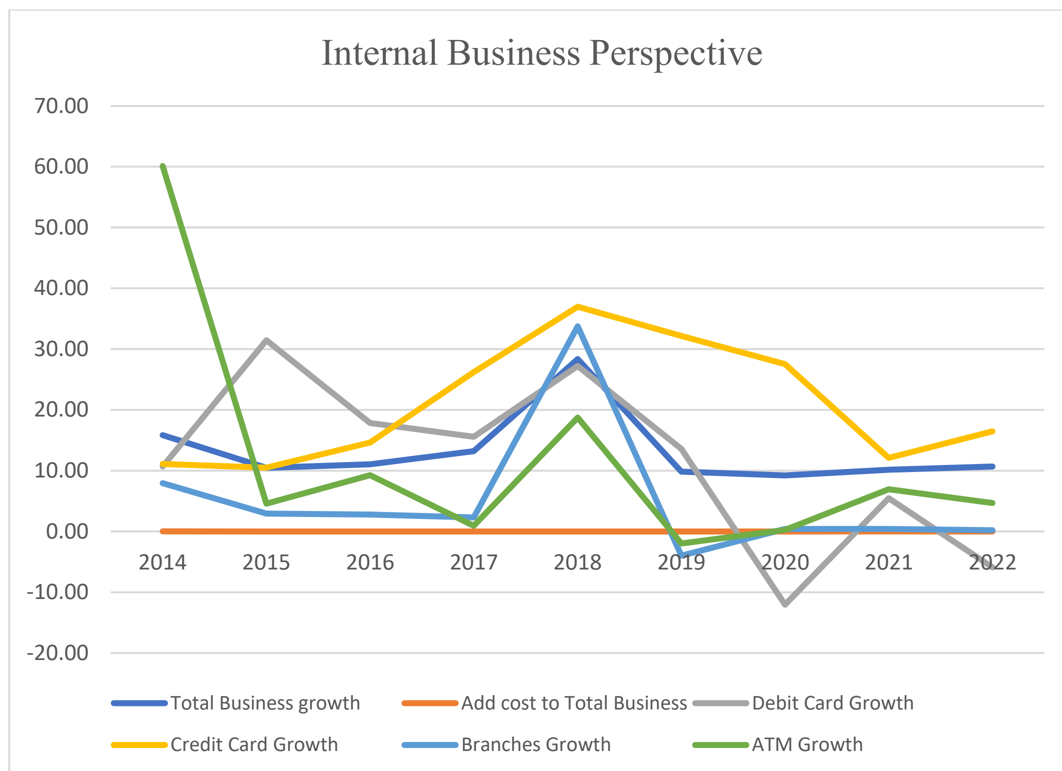
The Paired Sample t-test result of SBI for the variable Complaint redressal ratio indicates that the 'p' value is 0.02. it is statistically significant at 5% level of significance; we reject the null hypothesis that there is no significant difference in the Complaint redressal ratio of SBI during the pre- post merger periods. Therefore, the mean differences in the complaint redressal ratio of SBI during the pre- post merger periods is statistically significant.

Internal business process perspective

H0: There is no significant difference in the internal business process perspective of SBI during pre- post merger periods.

Figure 6.3

Internal Business Process Perspective fluctuations of SBI from 2014-2022.



Source: Author's Calculation.

The figure shows the fluctuations of the variables from the Internal Business perspective. This chart shows the merger year (2018) data to understand the intensity of the variations. But for analysis excluded the merger year 2018. It is visible that all variables are stabilizing since 2019, immediately after the merger impact on 2018.

Table 6.16

Descriptive statistics of state Bank of India on pre- post merger periods based on the Internal business process perspective of Balanced Score Card.

Perspective	variables	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Mean	S. D	MIN	MAX	Mean	S. D	MIN	MAX
Internal Business Process Perspective	Growth in total business	12.63	2.43	10.47 (2015)	15.83 (2014)	9.96	0.61	9.21 (2020)	10.68 (2022)
	Add cost to total business	0.009	0.001	0.008 (2017)	0.01 (2014)	0.005	0.001	0.004 (2020 &2021)	0.007 (2019)
	Debit card growth	18.89	8.90	10.67 (2014)	31.45 (2015)	0.26	11.46	-12.06 (2020)	13.57 (2019)
	Credit card growth	15.61	7.30	10.49 (2015)	26.22 (2017)	22.05	9.36	12.08 (2021)	32.17 (2019)
	Growth in branches	3.98	2.67	2.28 (2017)	7.96 (2014)	-0.75	2.16	-3.99 (2019)	0.40 (2021)
	Growth in ATM	18.73	27.81	0.93 (2017)	60.13 (2014)	2.46	4.07	-1.98 (2019)	6.94 (2021)

Source: Author’s calculation.

Growth in Total business

In the pre-merger period, the mean value of growth in total business was 12.63% and in the post-merger period the mean value reduced to 9.96%. The standard deviation for total business during the post-merger stage was 0.61 and it was 2.43 in the pre-merger stage.

To analyze whether the differences of total business growth of SBI during the pre-post merger periods is statistically significant, conducted Wilcoxon signed rank test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for total business growth was 0.057. Since it is lesser than 0.05, we assumed that the data is not normal and choose the non-parametric Wilcoxon signed rank test.

Table 6.17

Wilcoxon signed rank test result of SBI for the variable Total business growth.

Variable	Median difference	Standard error	Z value	N	Sig.(P) value
Total business growth	0	2.73	0.00	5	0.06***

Source: Author's calculation ***Significant @10%.

The Wilcoxon signed rank test result of SBI for variable total business growth shows the median differences between pre-post total business growth are equal to 0. The obtained 'p' value is 0.06. since the 'p' value is significant at 10%, reject the null hypothesis that there is no significant difference in the total business growth of SBI during the pre- post merger periods. Therefore, it indicates that the variation in the post-merger total business growth is statistically significant compared with the pre-merger phase.

Advertisement cost to total business cost

During the pre-merger period the mean value of advertisement cost to total business ratio was 0.009% and in the post-merger stage it reduced to 0.005%. During the study period spending on advertisement was maximum in the year 2014. In 2014 SBI has spent 0.01% for advertisement and publicity. During the study period spending on advertisement was very least in the years 2020 and 2021. Both these years SBI has spent only 0.004% on advertisement and publicity. A lower ratio suggests efficient spending on advertising per unit of business.

To analyze whether the mean differences of advertisement cost to total business ratio of SBI during the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for complaint redressal ratio was 0.283. Since it is higher than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.18

Paired Sample t-test result of SBI for the variable advertisement cost to total business ratio.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Advertisement cost to total business ratio	0.004	0.001	7.01	3	0.006**

Source: Author's calculation **Significant @ 1%.

The Paired Sample t-test result of SBI for the variable advertisement cost to total business ratio indicates that the 'p' value is 0.006. Since it is lower than 0.01, we reject the null hypothesis at 1 % level of significance. Therefore, the mean differences in the advertisement cost to total business ratio of SBI during the pre- post merger periods is statistically significant.

Debit card growth

The average Debit card growth of SBI during pre-merger stage was 18.89% and it reduced to 0.26% in the post-merger stage. In the post-merger stage, the growth of debit cards was highly fluctuating, and it is visible from the higher standard deviation of 11.46%. During the study period higher debit card growth of 31.45% was happened in the pre-merger year 2015. In the year 2020 negative debit card growth of -12.06% was happened.

To analyze whether the mean differences of debit card growth of SBI during the pre-post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for debit card growth was 0.865. Since it is higher than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.19

Paired Sample t-test result of SBI for the variable Debit card growth.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Debit card growth	18.63	19.40	1.92	3	0.151

Source: Author's calculation

The Paired Sample t-test result of SBI for the variable debit card growth shows that the 'p' value is 0.151. Since it is higher than the significance levels, we failed to reject and retain the null hypothesis that there is no significant difference in the debit card growth of SBI during the pre- post merger periods. Therefore, the mean differences in the debit card growth of SBI during the pre- post merger periods is statistically insignificant.

Credit card growth

The average Credit card growth of SBI during pre-merger stage was 15.61% and it increased to 22.05% in the post-merger stage. During the study period higher credit card growth of 32.17% was happened in the post-merger period in the year 2019 and least credit card growth of 10.49% was happened in the pre-merger period in the year 2015.

To analyze whether the mean differences of Credit card growth of SBI during the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for credit card growth was 0.126. Since it is higher than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.20

Paired Sample t-test result of SBI for the variable Credit card growth.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Credit card growth	-6.45	14.94	-.863	3	0.451

Source: Author's calculation

The Paired Sample t-test result of SBI for the variable credit card growth indicates that the ‘p’ value is 0.451. Failed to reject the null hypothesis that there is no significant difference in the credit card growth of SBI during the pre- post merger periods. Therefore, the mean differences in the credit card growth of SBI during the pre- post merger periods is statistically insignificant.

Growth in branches

There is decrease in the mean value of branch growth of SBI in the post-merger period. The mean value has decreased to -0.75% in post-merger period from 3.98% in pre-merger period. As a result of the merger with associates’ Banks and Bhartiya Mahila Bank, there was a sudden and huge hike in the branch numbers in the year 2018.

To analyze whether the differences of branch growth of SBI during the pre- post merger periods is statistically significant, conducted Wilcoxon signed rank test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for branch growth was .479. Since it is higher than 0.05, we assumed that the data is not normal and choose the non-parametric Wilcoxon signed rank test.

Table 6.21

Paired Sample t test result of SBI for the variable branch growth.

Variable	Mean difference	S.D Difference	t value	df	Sig.(P) value
Branch growth	4.73	4.81	1.96	3	0.14

Source: Author’s calculation

The Paired Sample t test result of SBI for the variable branch growth. The mean differences between pre-post branch growth is 4.73. The obtained ‘p’ value is 0.14. since the ‘p’ value is higher than significance levels, failed to reject the null hypothesis that there is no significant difference in the branch growth of SBI during the pre- post merger periods. Therefore, we retain the null hypothesis.

Growth in ATM

While observing the table no it is clear that during the pre-merger period the mean value of ATM growth was 18.73% and in the post-merger period the mean value reduced to 2.46%. It indicates that in the post-merger stage there is a reduction in the overall growth of ATM branches. In 2019 the growth rate of ATM's has reduced to -1.98%.

To analyze whether the differences of ATM growth of SBI during the pre- post merger periods is statistically significant, conducted Wilcoxon signed rank test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for ATM growth was 0.001. Since it is lesser than 0.05, we assumed that the data is not normal and choose the non-parametric Wilcoxon signed rank test.

Table 6.22

Wilcoxon signed rank test result of SBI for the variable ATM growth.

Variable	Median difference	Standard error	Z value	N	Sig.(P) value
ATM growth	0	2.73	2.00	4	0.273

Source: Author's calculation

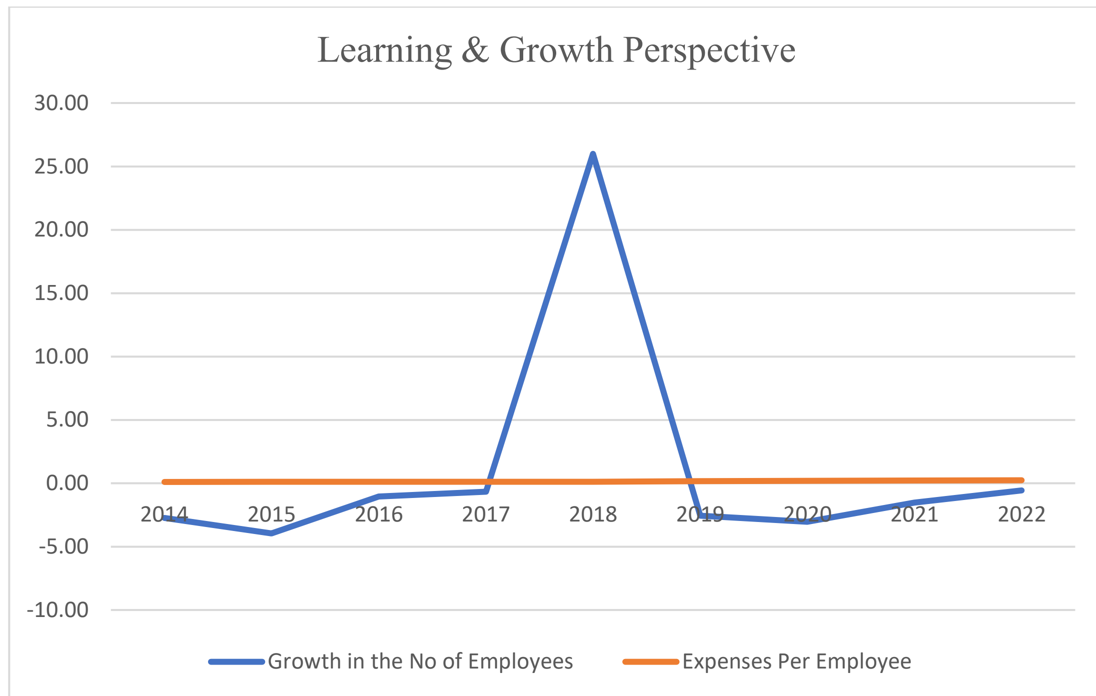
The Wilcoxon signed rank test result of SBI for the variable ATM growth shows the median differences between pre-post ATM growth are equals to 0. The obtained 'p' value is 0.273. Since the 'p' value is higher than the conventional thresholds, the difference in the ATM growth of SBI during the pre- post merger periods is not statistically significant. Therefore, we retain the null hypothesis.

Learning & Growth Perspective

H0: There is no significant difference in the Learning & Growth Perspective of SBI during pre- post merger periods.

Figure 6.4

Learning & Growth Perspective fluctuations of SBI from 2014-2022.



Source: Author's Calculation.

The figure shows the fluctuations of the variables from the Learning & Growth Perspective. This chart shows the merger year (2018) data to understand the intensity of the variations. But for analysis excluded the merger year 2018. It is visible that all variables are stabilizing since 2019, immediately after the merger impact on 2018.

Table 6.23

Descriptive statistics of state Bank of India on pre- post merger periods based on the Learning & Growth perspective of Balanced Score Card.

Perspective	Variables	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Mean	S.D	MIN	MAX	Mean	S.D	MIN	MAX
Learning & Growth Perspective	Growth in the number of employees	-2.11	1.53	-0.67 (2017)	-3.96 (2015)	-1.92	1.10	-0.57 (2022)	-3.03 (2020)
	Growth in Expenses per employee	0.11	0.01	0.13 (2017)	0.10 (2014)	0.20	0.03	0.24 (2022)	0.16 (2019)

Source: Author's calculation.

Growth in the number of employees

While observing the above table from the mean value, there is an increasing decline rate in the number of employees after the merger. In the pre-merger period, the mean value was -2.11% and it decreased to-1.92% during the post-merger period. As a result of the merger, an immediate growth of 25.99% in the number of employees was happened in the year 2015. In the pre-merger period, steepest declining rate in the number of employees was happened in the year 2015 and the declining percentage was -3.96. In the post-merger period, the least decline percentage was -0.57 in the year 2022. It indicates that comparing with the previous year, each year SBI is reducing its employee appointments.

To analyze whether the differences of growth in the number of employees of SBI during the pre- post merger periods is statistically significant, conducted Wilcoxon signed rank test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for growth in the number of employees was .497. Since it is higher than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.24

Paired Sample t test result of SBI for the variable growth in the number of employees.

Variable	Mean difference	S.D Difference	t value	df	Sig.(P) value
Growth in the number of employees	-0.18	0.57	-0.64	3	0.563

Source: Author's calculation

The Wilcoxon signed rank test result of SBI for the variable growth in the number of employees shows the mean differences between pre-post growth in the number of employees is -0.18. The obtained 'p' value is 0.563. since the 'p' value is higher , failed to reject the null hypothesis that there is no significant difference in the growth in the number of employees of SBI during the pre- post merger periods. Therefore, we retain the null hypothesis.

Expenses per employee

By observing the table no, it can be interpreted that during the pre-merger period the mean value for expenses per employee was 0.11% and it increased to 0.20% in the post-merger period. During the study period the minimum expenditure spend on per employee was in the year 2014 and it was 0.10%. The maximum expenditure spends on per employee was on 2022 and the percentage was 0.24%. So it can conclude that there is a gradual improvement in the spending on employees of SBI.

To analyze whether the mean differences of growth in expenses per employee of SBI during the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for growth in expenses per employee was 0.506. Since it is higher than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.25

Paired Sample t-test result of SBI for the variable growth of expenses per employee.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Growth of expenses per employee	-0.08	0.022	-7.44	3	0.005**

Source: Author's calculation **Significant @ 1%.

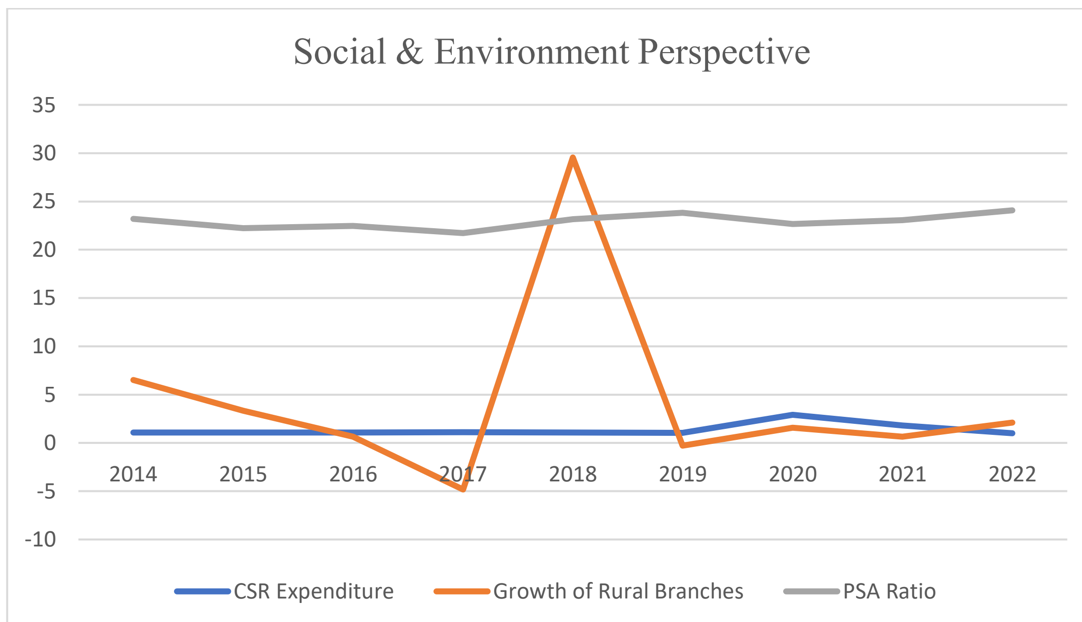
The Paired Sample t-test result of SBI for the variable growth in expenses per employee indicates that the 'p' value is 0.005 and it is significant at 1%. Hence, failed to reject the null hypothesis that there is no significant difference in the growth of expenses per employee of SBI during the pre- post merger periods. Therefore, the mean differences in the growth of expenses per employee of SBI during the pre- post merger periods is statistically significant.

Social & Environment Perspective

H0: There is no significant difference in the social perspective of SBI during pre- post merger periods.

Figure 6.5

Social & Environment Perspective fluctuations of SBI from 2014-2022.



Source: Author's Calculation.

The figure shows the fluctuations of the variables from the Social & Environment Perspective. This chart shows the merger year (2018) data to understand the intensity of the variations. But for analysis excluded the merger year 2018. It is visible that all variables are stabilizing since 2019, immediately after the merger impact on 2018.

Table 6.26

Descriptive statistics of state Bank of India on pre- post merger periods based on the Social & Environment perspective of Balanced Score Card.

Perspective	Variables	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Mean	S.D	MIN	MAX	Mean	S.D	MIN	MAX
Social & Environment	CSR expenditure	1.08	0.02	1.06 (2015)	1.10 (2017)	1.69	0.89	1.00 (2022)	2.91 (2020)
	Branch growth in rural areas	1.41	4.80	-4.83 (2017)	6.51 (2014)	1.01	0.90	-0.27 (2019)	2.10 (2022)
	Priority sector advances	22.40	0.62	21.72 (2017)	23.21 (2014)	23.40	0.58	22.65 (2020)	24.08 (2022)

Source: Author's Calculation.

CSR expenditure

The SBI undertakes its CSR activities by its own and through SBI foundation. From the above table it is very clear that during the post-merger period the mean value of CSR spending has increased to 1.69% from 1.08% in the pre-merger period. The standard deviation was 0.02% in the pre-merger period and the deviation increased to 0.89% in the post-merger period. During the study period highest spending towards CSR was happened in the year 2020 and it was 2.91%. During the study period SBI has maintained a consistent contribution of 1% of average net profit towards the CSR fund. In the year 2020 SBI has spent 2.91% of average net profit towards CSR and major portion of this fund was channelized towards CORONA aids.

To analyze whether the differences of CSR expenditure of SBI during the pre- post merger periods is statistically significant, conducted Wilcoxon signed rank test based

on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for CSR expenditure was <.001. Since it is lesser than 0.05, we assumed that the data is not normal and choose the non-parametric Wilcoxon signed rank test.

Table 6.27

Wilcoxon signed rank test result of SBI for the variable CSR expenditure.

Variable	Median difference	Standard error	Z value	N	Sig.(P) value
CSR expenditure	0	2.73	7.00	4	0.465

Source: Author's calculation

The Wilcoxon signed rank test result of SBI for the variable CSR expenditure shows the median differences between pre-post CSR expenditures are equal to 0. The obtained 'p' value is 0.465. since the 'p' value is higher, failed to reject the null hypothesis that there is no significant difference in the CSR expenditure of SBI during the pre- post merger periods. Therefore, we retain the null hypothesis.

Branch Growth in Rural Areas

There is a growth in number of branches after merger. The pre-merger mean value was 1.41% and it decreased to 1.01% during the post-merger. As a result of the merger there was 29.55% growth happened in the number of branches in the year 2018. In 2019 comparing with the year 2018 the branch growth was -0.27%. In 2022 branch growth in rural areas of SBI was 2.10%.

To analyze whether the differences of branch growth in rural areas of SBI during the pre- post merger periods is statistically significant, conducted Wilcoxon signed rank test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for branch growth in rural areas was 0.687. Since it is higher than 0.05, we assumed that the data is normal and choose Paired Sample t test.

Table 6.28

Paired Sample t-test result of SBI for the variable branch growth in rural areas.

Variable	Mean difference	S.D Difference	t value	df	Sig.(P) value
Branch growth in rural areas	0.40	5.66	0.142	3	0.896

Source: Author's calculation

The Paired Sample t test result of SBI for the variable branch growth in rural areas shows the median differences between pre-post branch growth in rural areas are equal to 0. The obtained 'p' value is 0.896. since the 'p' value is higher, failed to reject the null hypothesis that there is no significant difference in the branch growth in rural areas of SBI during the pre- post merger periods. Therefore, we retain the null hypothesis.

Priority sector advances ratio

The lending towards prority sectors has been increased during the post-merger period. in the pre-merger period the mean value was 22.40% and it increased to 23.40% during the post merger period. During the study period the maximum lending towards prority sector was happened in the year 2022 and it was 24.08%. During the post-merger period the least lending towards prorty sector was happened in the year 2020 and it was 22.65%.

To analyze whether the mean differences of priority sector advances of SBI during the pre- post merger periods is statistically significant, conducted a Paired Sample t test based on the Shapiro-Wilk normality testing. The p value of Shapiro-Wilk normality test for priority sector lending was 0.936. Since it is higher than 0.05, we assumed that the data is normal and choose the Paired Sample t test.

Table 6.29

Paired Sample t-test result of SBI for the variable growth of expenses per employee.

Variable	Mean difference	S.D difference	t value	df	Sig.(P) value
Priority sector advances	-0.99	0.91	-2.18	3	0.117

Source: Author's calculation

The Paired Sample t-test result of SBI for the variable priority sector advances indicates that the ‘p’ value is 0.117. Since it is higher than significance levels, we failed to reject the null hypothesis that there is no significant difference in the priority sector advances ratio of SBI during the pre- post merger periods. Therefore, the mean differences in the priority sector advances of SBI during the pre- post merger periods is statistically insignificant.

6.3 Comparison of the Overall Corporate Performance of SBI with Other Public Sector Banks.

H0: There is no significant difference in the overall corporate performance of SBI with other selected public sector Banks during pre- post merger periods.

Researcher conducted ANOVA and Kruskal Wallis tests to identify the statistical significance of variations in the mean scores of public sector Banks based on different perspectives of the balanced scorecard method.

Financial perspective:

H0: There is no significant difference in the Disclosure & Transparency dimension of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.

Financial perspective include the cash deposit ratio, credit deposit ratio, capital adequacy ratio, net NPA to advances ratio, net interest margin to total asset, return on asset and return on equity

Cash Deposit Ratio

Based on the Shapiro-Wilk normality test for the variable cash deposit ratio, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.30

Kruskal Wallis test result of Public Sector Banks' Cash Deposit Ratio During Pre-Merger and Post-Merger Periods.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
Cash Deposit Ratio	State Bank of India	6.80	0.72	31.64	<0.001**	5.93	0.53	32.78	<0.001**
	Bank of Baroda	3.71	0.24			4.09	0.76		
	Bank of India	5.08	1.08			7.64	2.49		
	Bank of Maharashtra	5.74	2.75			7.15	1.72		
	Canara Bank	4.47	0.54			4.5	0.61		
	Central Bank of India	5.40	9.85			9.65	1.74		
	Indian Bank	4.84	0.96			4.44	1.31		
	Indian overseas Bank	5.29	0.52			4.85	2.10		
	Punjab and Sind Bank	4.71	0.71			6.75	2.43		
	Punjab national Bank	4.81	0.40			4.84	0.62		
	UCO Bank	3.94	0.25			4.52	0.52		
	Union Bank	4.65	0.83			4.46	0.37		

Source: Author's calculation. ** Significance at 1% level of significance

The table above displays the results of the Kruskal Wallis test for the cash deposit ratio variable over two time periods. The P value for both periods was less than 0.001, indicating significance at the 1% level. This suggests a significant difference in the cash deposit ratio of public sector Banks between the two study periods.

To identify any significant variations in the cash deposit ratio of Banks compared to SBI, pairwise comparison tests were conducted. The relevant portion of the results is shown below.

Table 6.31

Pairwise comparison test of SBI and public sector Banks in the pre- post merger periods based on cash deposit ratio.

Banks		Pre-Merger (2014-2017)		Post-Merger (2019-2022)	
		Mean Rank	Sig.(P) value	Mean rank	Sig.(P) value
SBI	Bank of Baroda	3.50	0.004**	12.25	1.000
	Bank of India	26.50	1.000	37.00	1.000
	Bank of Maharashtra	37.75	1.000	38.50	1.000
	Canara Bank	18.25	0.710	14.00	1.000
	Central Bank of India	36.00	1.000	43.50	1.000
	Indian Bank	18.88	0.849	14.00	1.000
	Indian overseas Bank	34.63	1.000	19.88	1.000
	Punjab and Sind Bank	22.75	1.000	36.50	1.000
	Punjab national Bank	19.50	1.000	19.00	1.000
	UCO Bank	9.50	0.038*	12.00	1.000
	Union Bank	23.25	1.000	14.50	1.000

**significant at 1%level of significance.* significant at 5%level of significance
Source: Author's calculation.

During the pre-merger period, the Bank of Baroda and UCO Bank had significantly different cash deposit ratios compared to SBI, with P values of 0.004 and 0.038. The other Banks showed no significant difference from SBI during this pre-merger period. However, in the post-merger period, no Bank showed a significant difference from SBI in terms of cash deposit ratio. Indicates that in the post-merger period, all Banks exhibited similar patterns to SBI regarding Cash deposit ratio.

Credit Deposit Ratio

Based on the Shapiro-Wilk normality test for the variable credit deposit ratio, the P value was 0.007. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.32

Kruskal Wallis test result of Public Sector Banks' Credit Deposit Ratio During Pre-Merger and Post-Merger Periods.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Credit Deposit Ratio	State Bank of India	83.51	4.26	26.01	<0.006**	69.60	3.96	37.68	<0.001**
	Bank of Baroda	68.08	2.79			73.22	0.62		
	Bank of India	72.8	4.62			65.94	4.05		
	Bank of Maharashtra	76.76	5.09			58.81	3.20		
	Canara Bank	69.35	1.61			66.93	3.79		
	Central Bank of India	70.69	12.72			48.51	0.74		
	Indian Bank	73.38	2.37			71.26	5.20		
	Indian overseas Bank	70.73	4.47			54.72	2.81		
	Punjab and Sind Bank	69.12	2.74			64.27	3.49		
	Punjab national Bank	75.22	4.39			65.28	3.19		
	UCO Bank	64.77	7.25			53.22	2.06		
	Union Bank	77.48	1.95			66.97	3.89		

Source: Author's calculation. **Significance at 1% level of significance

The table above displays the results of the Kruskal Wallis test for the variable of credit deposit ratio during pre-merger and post-merger periods. The P value for both periods were Statistically Significant. This indicates that the null hypothesis is rejected, and there is a significant difference in the credit deposit ratio among various public sector Banks. To identify the specific variations between SBI and other public sector Banks in terms of credit deposit ratio, a pairwise comparison test was conducted, and the relevant section of the results can be seen below.

Table 6.33

Pairwise comparison test for public sector Banks on pre- post merger periods based on credit deposit ratio.

Banks		Pre-merger (2014-2017)		Post-merger (2019-2022)	
		Mean Rank	Sig.(P) value	Mean rank	Sig.(P) value
SBI	Bank of Baroda	11.00	0.047*	43.50	1.000
	Bank of India	26.75	1.000	25.00	1.000
	Bank of Maharashtra	33.50	1.000	16.50	1.000
	Canara Bank	16.25	0.285	29.75	1.000
	Central Bank of India	16.25	0.285	2.50	0.024*
	Indian Bank	26.50	1.000	39.00	1.000
	Indian overseas Bank	21.75	1.000	10.75	0.421
	Punjab and Sind Bank	17.00	0.361	25.50	1.000
	Punjab national Bank	27.75	1.000	26.25	1.000
	UCO Bank	12.50	0.081***	7.25	0.136
	Union Bank	40.25	1.000	30.25	1.000

* significance at 5% level of significance. *** significance at 10% level of significance.
Source: Author's calculation.

During the Pre-merger period, Bank of Baroda and UCO Bank had significantly different credit deposit ratios than SBI, at the levels of 5%, and 10%. In the post-merger period, only the Central Bank of India showed a significant difference from

SBI at the 5% level of significance. Other Banks remained consistent with SBI in terms of credit deposit ratio across both periods.

Capital adequacy ratio.

Based on the Shapiro-Wilk normality test for the variable capital adequacy ratio, the P value was 0.008. Since the value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.34

Kruskal Wallis test result of Public Sector Banks' Capital Adequacy Ratio During Pre-Merger and Post-Merger Periods.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig. (P) value
Capital Adequacy Ratio	State Bank of India	12.78	0.55	29.47	0.002**	13.40	0.54	9.22	0.601
	Bank of Baroda	12.45	0.43			14.21	1.24		
	Bank of India	11.37	1.04			14.56	1.66		
	Bank of Maharashtra	11.19	0.48			14.01	1.93		
	Canara Bank	10.86	1.08			13.42	1.24		
	Central Bank of India	10.65	0.50			12.64	2.27		
	Indian Bank	13.03	0.44			14.92	1.62		
	Indian overseas Bank	10.30	0.48			12.28	2.46		
	Punjab and Sind Bank	11.05	0.14			14.91	3.57		
	Punjab national Bank	11.59	0.39			14.24	2.30		
	UCO Bank	11.81	1.49			12.72	1.52		
	Union Bank	10.68	0.67			12.69	1.15		

Source: Author’s calculation. ** Significance at 1% level of significance

The table displayed above presents the Kruskal Wallis test outcome for the capital adequacy ratio variable in two periods. The P value for pre-merger period was less than 0.002, which is statistically significant. Therefore, the null hypothesis is rejected, implying that there is a significant difference in the capital adequacy ratio among various public sector Banks in pre-merger period. In the post-merger periods the p value was 0.601. It is not statistically significant with any of the conventional threshold. It indicates that during the post-merger phase none of the Banks statistically significant with each other. To determine the specific differences between SBI and other public sector Banks in terms of capital adequacy ratio in pre-merger period, a pairwise comparison test was conducted, and the relevant portion of the result is provided below.

Table 6.35

Pairwise comparison test for public sector Banks on pre merger period based on capital adequacy ratio.

Banks		Pre-merger (2014-2017)	
		Mean Rank	Sig.(P) value
SBI	Bank of Baroda	43.50	1.000
	Bank of India	25.00	1.000
	Bank of Maharashtra	16.50	1.000
	Canara Bank	29.75	1.000
	Central Bank of India	2.50	0.309
	Indian Bank	39.00	0.089***
	Indian overseas Bank	10.75	0.074***
	Punjab and Sind Bank	25.50	1.000
	Punjab national Bank	26.25	1.000
	UCO Bank	7.25	1.000
	Union Bank	30.25	0.911

Source: Author's calculation. *** significance at10 % level of significance.

From the above pairwise comparison table it is clear that in the pre-merger period the capital adequacy ratio of SBI is statistically significant with indian overseas Bank and

Indian Bank at 10% significance level.Indian overseas Bank have least mean rank of 10.75. Indian Bank have higher mean rank of 39.00 compared to SBI.

Net NPA to Advances Ratio.

Based on the Shapiro-Wilk normality test for the variable Net NPA to Advances Ratio, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.36

Kruskal Wallis test result of Public Sector Banks' Net NPA to advances Ratio During Pre-Merger and Post-Merger Periods.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
Net NPA to Advances Ratio.	State Bank of India	3.14	0.84	9.86	0.543	1.87	0.87	23.40	0.016*
	Bank of Baroda	3.31	1.85			3.11	0.60		
	Bank of India	5.13	2.77			3.62	1.49		
	Bank of Maharashtra	5.27	4.18			3.63	2.08		
	Canara Bank	4.49	2.36			4.02	0.99		
	Central Bank of India	5.56	3.17			6.70	1.33		
	Indian Bank	3.35	1.11			3.25	0.75		
	Indian overseas Bank	8.79	5.08			4.51	3.56		
	Punjab and Sind Bank	4.09	1.92			5.63	2.43		
	Punjab national Bank	5.94	2.81			5.76	0.64		
	UCO Bank	6.62	3.37			4.70	2.97		
	Union Bank	3.98	2.04			5.06	1.24		

Source: Author's calculation. *Significance at 5% level of significance

Kruskal Wallis test for the variable "Net NPA to advances ratio" during pre-merger and post-merger shows that the P value for the pre-merger period is not statistically significant. Hence, retain the null hypothesis. This means that there is no significant difference in the NPA to advances ratio among various public sector Banks in the industry during the pre-merger period. However, for the post-merger period (2019-2022), the P value was 0.016, which is statistically significant and reject the null hypothesis. To identify the specific variations of SBI with other public sector Banks in the Net NPA to advances ratio during the post-merger period, a pairwise comparison test was conducted, and the relevant portion of the result is presented below.

Table 6.37

Pairwise comparison test for public sector Banks on post merger period based on Net NPA to advances ratio.

Banks		Post-merger (2019-2022)	
		Mean rank	Sig.(P) value
SBI	Bank of Baroda	12.88	1.000
	Bank of India	20.75	1.000
	Bank of Maharashtra	18.50	1.000
	Canara Bank	22.88	1.000
	Central Bank of India	39.75	0.047
	Indian Bank	15.13	1.000
	Indian overseas Bank	27.88	1.000
	Punjab and Sind Bank	31.38	0.734
	Punjab national Bank	37.25	0.114
	UCO Bank	28.88	1.000
	Union Bank	32.50	0.527

Source: Autor’s calculation.

From the above pairwise comparison table it is clear that during the post-merger period the variable Net NPA to Advances Ratio of SBI is not statistically significant

with any of the Banks. Indicates that all public sector Banks have similar Net NPA to Advances Ratio that of SBI in post-merger period.

Net Interest Margin to Total asset

Based on the Shapiro-Wilk normality test for the variable Net interest margin to total asset, the P value was 0.062. Since the P value is higher than 0.05, the researcher has adopted ANOVA.

Table 6.38

ANOVA test result of Public Sector Banks' Net Interest Margin to Total Assets Ratio During Pre-Merger and Post-Merger Periods.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Mean	S. D	F Value	Sig.(P) value	Mean	S. D	F Value	Sig.(P) value
Net Interest Margin to Total Asset.	State Bank of India	2.71	0.23	5.327	<0.001**	2.52	0.09	2.178	0.039*
	Bank of Baroda	1.93	0.07			2.61	0.28		
	Bank of India	1.96	0.10			2.22	0.13		
	Bank of Maharashtra	2.51	0.37			2.68	0.34		
	Canara Bank	1.84	0.11			2.27	0.40		
	Central Bank of India	2.27	0.15			2.44	0.52		
	Indian Bank	2.38	0.11			2.69	0.16		
	Indian overseas Bank	2.00	0.11			2.21	0.15		
	Punjab and Sind Bank	1.99	0.22			2.07	0.08		
	Punjab national Bank	2.65	0.44			2.39	0.24		
	UCO Bank	2.16	0.49			2.23	0.25		
	Union Bank	2.22	0.14			2.34	0.28		

** significance @ 1% level of significance. * significant @ 5% level of significance.

The P value for both periods is less than 0.05 and indicates that there is a difference in the Net interest margin to total asset ratio of public sector Banks during the study period and reject the Null hypothesis. In order to identify the variations of SBI with other public sector Banks regarding the variable Net interest margin to total asset, a Post-Hoc test has been conducted. The relevant part of the result is presented below.

Table 6.39

Post Hoc test of Public Sector Banks on Pre- post merger periods In India Based on Net Interest Margin to Total Asset Ratio.

I	Banks (J)	Pre-merger (2014-2017)		Post-merger (2019-2022)	
		Mean difference (I-J)	Sig.(P) value	Mean difference (I-J)	Sig.(P) value
SBI	Bank of Baroda	0.777	0.005**	-0.087	1.000
	Bank of India	0.747	0.008**	0.300	0.919
	Bank of Maharashtra	0.202	0.991	-0.162	0.999
	Canara Bank	0.870	0.001**	0.255	0.973
	Central Bank of India	0.435	0.410	0.080	1.000
	Indian Bank	0.327	0.790	-0.172	0.999
	Indian Overseas Bank	0.712	0.014*	0.315	0.892
	Punjab and Sind Bank	0.722	0.012*	0.450	0.489
	Punjab National Bank	0.062	1.000	0.135	1.000
	UCO Bank	0.547	0.131	0.295	0.927
	Union Bank	0.492	0.241	0.185	0.998

** significance @ 1% level of significance. * significance @ 5% level of significance
Source: Author's calculation.

The above table shows the Post Hoc test result for the variable Net interest margin to total asset during pre- and post-merger period. During the pre-merger period SBI is statistically significant with BOB, BOI, Canara Bank, IOB and PSB. But in the post-merger period Net interest margin to total asset ratio of SBI is not statistically

significant with any of the Banks. Indicates that during the post-merger period all public sector Banks have similar NIM to Total Asset Ratio that of SBI.

Return On Assets (ROA)

Based on the Shapiro-Wilk normality test for the variable Return on Asset, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.40

Kruskal Wallis test result of Public Sector Banks' Return on Assets (ROA) During Pre-Merger and Post-Merger Periods.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S.D	H-Statistic	Sig.(P) value	Median	S.D	H-Statistic	Sig.(P) value
Return On Asset	State Bank of India	0.55	0.13	17.38	0.097***	0.39	0.27	8.91	0.630
	Bank of Baroda	0.17	0.67			0.19	0.25		
	Bank of India	0.37	0.49			-0.13	0.61		
	Bank of Maharashtra	-0.04	0.56			-0.50	1.68		
	Canara Bank	0.19	0.50			0.11	0.33		
	Central Bank of India	-0.39	0.43			-0.50	0.85		
	Indian Bank	0.56	0.15			0.37	0.21		
	Indian overseas Bank	-0.53	0.68			-0.87	1.63		
	Punjab and Sind Bank	0.26	0.11			-0.77	1.40		
	Punjab national Bank	0.19	0.57			-0.20	0.71		
	UCO Bank	-0.21	0.94			-0.60	1.00		
	Union Bank	0.37	0.18			-0.10	0.53		

Source: Author's calculation. *** significance @ 10 %.

Kruskal Wallis test result for the variable Return on Asset during two periods. The P value for the period 2014-2018 was 0.097, which is significant at 10%and rejects the null hypothesis. It indicates that during the pre-merger period there is asignificance difference in the mean scores of various public sector Banks in the industry for the variable ROA. The P value for the post-merger period was 0.630, Which is higher than significance levels and retains the null hypothesis.

To identify the specific variations of SBI with other public sector Banks in the ROA during the pre-merger period, a pairwise comparison test was conducted, and the relevant portion of the result is presented below.

Table 6.41

Pairwise comparison test for public sector Banks on post merger period based on ROA.

Banks		Pre-merger (2014-2017)	
		Mean rank	Sig.(P) value
SBI	Bank of Baroda	26.38	1.000
	Bank of India	29.50	1.000
	Bank of Maharashtra	16.75	1.000
	Canara Bank	26.63	1.000
	Central Bank of India	11.75	0.708
	Indian Bank	38.63	1.000
	Indian overseas Bank	10.00	0.420
	Punjab and Sind Bank	22.00	1.000
	Punjab national Bank	25.75	1.000
	UCO Bank	21.50	1.000
	Union Bank	28.13	1.000

Source: Autor’s Calculation.

From the Pairwise comparison table it is clear that during the pre-merger period the variable ROA of SBI is not statistically significant with any of the Banks. Indicates that all public sector Banks have similar ROA that of SBI in post-merger period.

Return On Equity(ROE)

Based on the Shapiro-Wilk normality test for the variable Return on equity, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.42

Kruskal Wallis test result of Public Sector Banks' Return on Equity (ROE) During Pre-Merger and Post-Merger Periods.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Return on Equity	State Bank of India	8.66	2.09	14.46	0.208	8.17	5.74	10.14	0.517
	Bank of Baroda	6.2	11.76			1.04	5.42		
	Bank of India	0.26	13.17			-1.04	10.32		
	Bank of Maharashtra	3.4	10.81			5.94	34.51		
	Canara Bank	6.11	8.36			3.84	8.00		
	Central Bank of India	-8.09	7.39			-4.84	15.24		
	Indian Bank	7.67	1.98			5.92	4.10		
	Indian overseas Bank	-10.68	12.86			-10.10	27.67		
	Punjab and Sind Bank	4.56	1.92			-13.34	20.42		
	Punjab national Bank	5.73	9.10			2.25	13.54		
	UCO Bank	-2.53	17.99			-6.23	14.39		
	Union Bank	7.83	3.33			-1.47	11.04		

Source: Author's calculation.

Kruskal Wallis test result for the variable Return on Equity during the pre-merger and post-merger periods. The P values for the pre- merger and post-merger periods were 0.208 and 0.517.Both these values are not statistically significant and retains the null hypothesis.It indicates that there is no significant difference in the mean scores of various public sector Banks in the industry for the variable ROE.

Customer perspective

H0: There is no significant difference in the Customer Perspective of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.

Deposit Growth

Based on the Shapiro-Wilk normality test for the variable Deposit growth, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.43

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on Deposit Growth under Customer perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Deposit Growth	State Bank of India	14.51	3.63	8.645	0.655	10.70	2.50	15.47	0.162
	Bank of Baroda	6.68	11.17			8.09	21.17		
	Bank of India	8.39	11.97			3.39	6.16		
	Bank of Maharashtra	9.18	10.53			11.32	7.37		
	Canara Bank	7.93	7.99			10.81	26.80		

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
	Central Bank of India	6.33	3.10			4.25	1.52		
	Indian Bank	4.82	5.29			13.27	47.85		
	Indian overseas Bank	1.03	10.46			5.20	4.21		
	Punjab and Sind Bank	3.79	10.91			1.58	7.78		
	Punjab national Bank	11.74	2.19			4.69	26.44		
	UCO Bank	2.30	8.84			7.70	5.33		
	Union Bank	8.92	2.72			10.06	49.01		

Source: Author's calculation.

Kruskal Wallis test result for the variable deposit growth in two periods. Both the P values are higher than the significance levels. So failed to reject the null hypothesis. Which indicates that there is no significant difference in the cash deposit mean scores of various Banks in the industry during the pre-merger and post-merger periods.

Credit Growth

Based on the Shapiro-Wilk normality test for the variable Credit Growth, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.44

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on Credit Growth under Customer perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
Credit Growth	State Bank of India	10.02	4.10	9.53	0.572	9.00	3.78	11.83	0.376
	Bank of Baroda	3.85	13.22			9.86	20.24		
	Bank of India	5.24	16.17			4.03	7.55		
	Bank of Maharashtra	9.99	12.48			11.48	13.98		
	Canara Bank	7.47	10.96			11.08	20.63		
	Central Bank of India	-0.68	12.92			3.37	5.88		
	Indian Bank	2.76	7.32			12.47	36.86		
	Indian overseas Bank	-4.34	9.42			2.67	9.01		
	Punjab and Sind Bank	5.68	9.79			4.12	9.89		
	Punjab national Bank	8.65	4.70			6.83	18.79		
	UCO Bank	-3.20	13.03			5.97	8.45		
	Union Bank	8.62	3.12			8.97	40.50		

Source: Author's calculation.

According to the table above, the Kruskal Wallis test results indicate that there was no significant difference in the credit growth mean scores of various Banks in the industry during the pre-merger and post-merger periods. The P values for these periods were 0.572 and 0.376 respectively, both values are higher than the significance levels, thus retaining the null hypothesis.

Savings Account Growth

Based on the Shapiro-Wilk normality test for the variable Savings Account Growth, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.45

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on savings account growth under Customer Perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
Savings Account Growth	State Bank of India	13.57	7.86	3.73	0.977	10.39	2.93	3.88	0.973
	Bank of Baroda	14.32	9.76			13.17	20.86		
	Bank of India	12.80	9.91			11.33	5.67		
	Bank of Maharashtra	14.55	9.69			12.82	9.02		
	Canara Bank	15.45	6.61			12.12	27.89		
	Central Bank of India	12.12	6.64			8.80	2.59		
	Indian Bank	14.83	5.94			9.36	72.96		
	Indian overseas Bank	9.80	5.99			9.61	3.88		
	Punjab and Sind Bank	11.32	7.22			9.79	4.80		
	Punjab national Bank	13.65	8.40			8.12	27.44		
	UCO Bank	12.27	8.41			8.55	1.66		
	Union Bank	13.30	8.21			10.17	46.78		

Source: Author's calculation.

The table above displays the results of the Kruskal Wallis test for the variable "Savings Account Growth" over two different time periods: 2014-2017 and 2019-2022. The P values for both time frames was higher than the significance levels. Hence, retains the null hypothesis that there is no significant difference in the Savings Account Growth of Public sector Banks during both the timeframes.

Current Account Growth

Based on the Shapiro-Wilk normality test for the variable Current Account Growth, the P value was <0.001. Since the value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.46

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on Current Account Growth under Customer Perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Current Account Growth	State Bank of India	9.52	5.14	13.81	0.244	9.34	12.17	5.32	0.914
	Bank of Baroda	14.14	31.96			17.39	15.15		
	Bank of India	7.97	8.74			8.81	7.96		
	Bank of Maharashtra	0.89	6.55			20.44	19.62		
	Canara Bank	12.87	8.13			10.43	41.85		
	Central Bank of India	-4.53	8.70			6.74	8.02		
	Indian Bank	10.54	5.66			8.13	66.49		
	Indian overseas Bank	5.29	11.91			9.95	7.68		

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
	Punjab and Sind Bank	7.05	13.73			13.64	29.79		
	Punjab national Bank	7.14	10.16			9.21	29.21		
	UCO Bank	-12.97	21.59			-6.51	101.35		
	Union Bank	-6.52	26.83			10.00	67.42		

Source: Author's calculation.

The table above displays the results of the Kruskal Wallis test for the variable Savings account growth in two periods: 2014-2017 and 2019-2022. The P value for the pre-merger period was 0.244, indicating that there is no significant difference in the current account growth of various public sector Banks in the industry, as it failed to reject the null hypothesis. Similarly, the P value for the post-merger period was 0.914, which also retains the null hypothesis since it is higher than the significance levels.

CASA Ratio

Based on the Shapiro-Wilk normality test for the variable CASA ratio, the P value was 0.337. Since the P value is higher than 0.05, the researcher has adopted ANOVA.

Table 6.47

ANOVA test result of public sector Banks on pre- post merger periods based on CASA Ratio under Customer Perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Mean	S. D	F value	Sig.(P) value	Mean	S. D	F value	Sig.(P) value
CASA Ratio	State Bank of India	42.86	1.33	13.87	<0.001**	44.87	0.56	23.93	<0.001**
	Bank of Baroda	27.67	3.01			37.99	3.30		
	Bank of India	25.75	4.38			37.30	1.89		
	Bank of Maharashtra	38.64	4.20			52.95	3.79		
	Canara Bank	27.90	3.40			33.42	2.17		
	Central Bank of India	35.52	2.61			48.12	2.16		
	Indian Bank	31.07	4.35			38.42	4.31		
	Indian overseas Bank	28.81	5.13			41.17	2.37		
	Punjab and Sind Bank	23.17	3.01			30.74	3.19		
	Punjab national Bank	41.61	3.20			45.12	1.75		
	UCO Bank	29.92	0.99			40.57	1.98		
	Union Bank	31.27	2.30			36.14	0.41		

Source: Author's calculation ** significance @ 1% level of significance.

The above table shows the ANOVA result of Banks for the periods 2014-2017 and 2019-2022. The P value for both the periods are significant at1%. Indicates that there is a difference in the CASA ratio of public sector Banks during the study period. In order to identify the variations of SBI with other public sector Banks the Post-Hoc test has been conducted. The relevent part of the result is present below.

Table 6.48

Post Hoc test result for public sector Banks on pre- post merger periods based on CASA Ratio.

I	Banks (J)	Pre-Merger (2014-2017)		Post-Merger (2019-2022)	
		Mean difference (I-J)	Sig.(P) value	Mean difference (I-J)	Sig.(P) value
SBI	Bank of Baroda	15.19	<0.001**	6.88	0.025*
	Bank of India	17.11	<0.001**	7.57	0.009**
	Bank of Maharashtra	4.22	0.823	-8.07	0.004**
	Canara Bank	14.96	<0.001**	11.45	<0.001**
	Central Bank of India	7.34	0.128	-3.24	0.819
	Indian Bank	11.79	<0.001**	6.45	0.045**
	Indian overseas Bank	14.05	<0.001**	3.70	0.674
	Punjab and Sind Bank	19.69	<0.001**	14.12	<0.001**
	Punjab national Bank	1.25	1.000	-0.247	1.000
	UCO Bank	12.93	<0.001**	4.30	0.460
	Union Bank	11.58	0.001**	8.73	0.002**

** Significant @1% level of significance.* Significant @5% level of significance
Source: Author’s calculation.

During the pre-merger period (2014-2017), the CASA ratio of SBI was notably higher than most of the other public sector Banks. The most significant difference was observed with Punjab and Sind Bank at 19.69 ($p < 0.001$). On the other hand, SBI's CASA ratio was closest to that of Punjab national Bank, with a negligible mean difference of 1.25 ($p = 1.000$), indicating no significant difference. Significant disparities in the CASA ratio were evident with Banks like Bank of Baroda, Bank of India, Canara Bank, Indian Bank, Indian overseas Bank, UCO Bank, and Union Bank, all with p-values less than 0.001.

In the post-merger period (2019-2022), there was a reduction in the CASA ratio difference between SBI and other Banks. Specifically, the difference between SBI and the Bank of Maharashtra flipped, showing a mean difference of -8.07 (p = 0.004), suggesting that the Bank of Maharashtra had a higher CASA ratio than SBI in this period. The CASA ratio differences between SBI and Banks like Bank of Baroda, Bank of India, Canara Bank, Indian Bank, and Union Bank remained significant. However, for some Banks like the Central Bank of India, Indian Overseas Bank, Punjab national Bank, and UCO Bank, there was no statistically significant difference in the CASA ratio when compared to SBI.

Complaint Redressal Ratio

Based on the Shapiro-Wilk normality test for the variable Complaint Redressal Ratio, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.49

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on Complaint Redressal Ratio under Customer Perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
Complaint Redressal Ratio	State Bank of India	98.37	0.85	29.39	0.002**	95.55	0.77	19.93	0.046*
	Bank of Baroda	99.47	0.07			98.11	0.49		
	Bank of India	98.71	0.39			97.54	0.92		
	Bank of Maharashtra	99.10	1.08			98.94	1.43		
	Canara Bank	97.23	1.74			97.93	0.94		
	Central Bank of India	97.43	1.95			97.96	1.03		

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
	Indian Bank	99.44	0.91			99.15	1.47		
	Indian overseas Bank	87.27	7.92			98.17	0.37		
	Punjab and Sind Bank	95.98	2.52			99.35	0.10		
	Punjab national Bank	97.67	2.35			99.43	0.84		
	UCO Bank	99.00	1.15			98.54	0.86		
	Union Bank	99.73	0.20			98.58	1.02		

**Significance @ 1% level of significance. *Significance @ 5 % level of significance.
Source: Author's calculation.

The table above displays the results of the Kruskal Wallis test for the complaint redressal ratio variable during the periods 2014-2017 and 2019-2022. The P value for the 2014-2017 period was 0.002, and for the post-merger period, it was 0.046. Both values are significant, which rejects the null hypothesis and indicates a significant difference in the complaint redressal ratio of various public sector Banks. To determine the exact variations of SBI with other public sector Banks, a pairwise comparison test was conducted, and the relevant part of the results is shown below.

Table 6.50

Pairwise comparison test for public sector Banks on pre- post merger periods based on complaint redressal ratio.

	Banks	Pre-Merger (2014-2017)		Post-Merger (2019-2022)	
		Mean Rank	Sig.(P) value	Mean rank	Sig.(P) value
SBI	Bank of Baroda	39.13	1.000	21.75	1.000
	Bank of India	27.38	1.000	16.75	1.000
	Bank of Maharashtra	33.63	1.000	30.38	0.375
	Canara Bank	17.88	1.000	18.75	1.000
	Central Bank of India	14.75	1.000	20.50	1.000
	Indian Bank	33.50	1.000	30.38	0.375
	Indian overseas Bank	4.75	1.000	22.75	1.000
	Punjab and Sind Bank	12.38	1.000	37.13	0.037*
	Punjab national Bank	18.88	1.000	36.25	0.052***
	UCO Bank	27.50	1.000	28.88	0.590
	Union Bank	42.63	1.000	27.50	0.879

*Significant @5% level of significance. ***Significant @10% level of significance
Source: Autor's calculation.

The pairwise comparison of the complaint redressal ratio between SBI and other public sector Banks for both pre-and post-merger periods reveals that during the pre-merger period (2014-2017), there's no significant difference between SBI and any of the other Banks as all the Sig.(P) values are 1.000.

In the post-merger period (2019-2022), while most Banks still showed no significant difference in complaint redressal ratio when compared to SBI (p-values close to or equal to 1.000), Punjab and Sind Bank and Punjab National Bank exhibited a significant difference. Indicating significant differences in their complaint redressal ratios compared to SBI during this period.

Internal business process perspective

H0: There is no significant difference in the Internal Business Process Perspective of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.

Growth in Total Business

Based on the Shapiro-Wilk normality test for the variable growth in total business, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis.

Table 6.51

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on Growth in Total Business under internal Business Process Perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Growth in Total Business	State Bank of India	12.12	2.43	13.98	0.234	9.98	0.61	16.77	0.135
	Bank of Baroda	5.54	11.98			8.83	20.77		
	Bank of India	7.05	13.77			6.44	3.50		
	Bank of Maharashtra	9.50	10.80			11.38	9.74		
	Canara Bank	7.72	9.06			10.88	24.25		
	Central Bank of India	2.68	3.98			4.40	2.88		
	Indian Bank	-1.54	4.79			12.49	43.07		
	Indian overseas Bank	-2.16	9.62			4.28	5.91		
	Punjab and Sind Bank	4.56	9.70			2.61	8.26		
	Punjab national Bank	9.81	2.76			5.35	23.35		
	UCO Bank	0.00	10.34			5.25	4.72		
	Union Bank	8.83	2.08			9.60	45.51		

Source: Author's calculation

Kruskal Wallis test result for the variable total business growth during the pre- post merger periods shows the P value for the pre-merger period was 0.234, which is higher than significance levels and retains the null hypothesis. It indicates that there is no significant difference in the total business growth of various public sector Banks in the industry for the variable business growth. The P value for the post-merger period was 0.135, Which is also higher than the significance levels and retains the null hypothesis.

Advertisement Cost to Total Business

Based on the Shapiro-Wilk normality test for the variable Advertisement Cost to Total Business, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis.

Table 6.52

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on Advertisement Cost to Total Business under Internal Business Process Perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Advertisement Cost to Total Business	State Bank of India	0.010	0.001	36.45	$<0.001^{**}$	0.005	0.001	37.12	$<0.001^{**}$
	Bank of Baroda	0.007	0.002			0.010	0.003		
	Bank of India	0.008	0.004			0.002	0.001		
	Bank of Maharashtra	0.007	0.001			0.010	0.003		
	Canara Bank	0.005	0.002			0.003	0.001		
	Central Bank of India	0.007	0.001			0.002	0.001		
	Indian Bank	0.003	0.000			0.002	0.000		

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
	Indian overseas Bank	0.002	0.003			0.000	0.000		
	Punjab and Sind Bank	0.001	0.000			0.002	0.001		
	Punjab national Bank	0.005	0.001			0.004	0.001		
	UCO Bank	0.008	0.001			0.002	0.002		
	Union Bank	0.011	0.001			0.005	0.003		

Source: Author's calculation **Significance @ 1% level of significance

Kruskal Wallis test result for the variable advertisement cost to total business during the periods pre-merger and post-merger. The P value for the pre-merger period was <0.001 and post-merger period was <0.001. Both the P values are lesser than significance levels and rejects the null hypothesis. It indicates that during the study period there is a significant difference in the advertisement cost to total business of various public sector Banks in advertisement cost to total business. In order to identify the exact variations of SBI with other public sector Banks the pairwise comparison test has been conducted. The relevent part of the result is present below.

Table 6.53

Pairwise comparison for public sector Banks on pre- post merger periods based on Advertisement Cost to Total Business.

Banks		Pre-Merger (2014-2017)		Post-Merger (2019-2022)	
		Mean Rank	Sig.(P) value	Mean Rank	Sig.(P) value
SBI	Bank of Baroda	31.00	1.000	43.25	1.000
	Bank of India	30.75	1.000	13.50	1.000
	Bank of Maharashtra	29.75	1.000	44.25	1.000
	Canara Bank	21.00	1.000	27.00	1.000
	Central Bank of India	25.50	1.000	16.75	1.000
	Indian Bank	9.50	0.175	12.75	1.000
	Indian overseas Bank	8.75	0.136	2.50	0.081***
	Punjab and Sind Bank	4.25	0.027*	17.00	1.000
	Punjab national Bank	16.00	1.000	31.75	1.000
	UCO Bank	33.50	1.000	20.00	1.000
	Union Bank	44.75	1.000	30.75	1.000

Source: Author's calculation. ***Significant @10% level of significance.

During the pre-merger, most Banks had similar advertisement costs to SBI, with p-values of 1.000. However, Punjab and Sind Bank had a significant p-value of 0.027, indicating that their advertisement costs were different from SBI.

During the post-merger, most Banks continued to have similar advertisement costs to SBI with p-values of 1.000. However, Indian Overseas Bank had a significant p-value of 0.081, indicating that advertisement costs to total business of Indian Overseas Bank were different from SBI.

Overall, while most Banks had similar advertisement costs to SBI, Indian Bank and Indian Overseas Bank had significant differences in either the pre-merger or post-merger period.

Debit Card Growth

Based on the Shapiro-Wilk normality test for the variable Debit Card Growth, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.54

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on Debit Card Growth under Internal business process perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Debit Card Growth	State Bank of India	16.72	8.90	12.77	0.308	-0.24	11.46	5.11	0.926
	Bank of Baroda	38.17	20.85			17.48	21.16		
	Bank of India	31.25	16.83			5.83	20.76		
	Bank of Maharashtra	15.90	10.94			26.67	29.63		
	Canara Bank	41.91	29.81			0.11	44.24		
	Central Bank of India	49.71	41.83			11.95	24.79		
	Indian Bank	23.20	20.20			5.06	39.87		
	Indian overseas Bank	32.09	23.50			6.97	8.11		
	Punjab and Sind Bank	88.69	129.39			13.48	23.24		

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
	Punjab national Bank	25.75	8.15			11.15	61.10		
	UCO Bank	42.10	16.25			15.91	27.79		
	Union Bank	22.91	30.06			15.65	60.39		

Source: Author's calculation

Kruskal Wallis test result for the variable debit card growth of selected public sector Banks during the pre-merger and post-merger periods. The obtained P value during both periods were 0.308 and 0.926 respectively. Both the values are not statistically significant and retains the null hypothesis. It indicates that during the study period, the trend of debit card growth is same across the selected Banks.

Credit Card Growth

Based on the Shapiro-Wilk normality test for the variable Credit Card Growth, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.55

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on Credit Card Growth under Internal Business Process Perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Credit Card Growth	State Bank of India	12.86	7.30	26.40	0.006**	21.99	9.36	29.83	0.002**
	Bank of Baroda	12.56	18.02			77.73	27.24		
	Bank of India	4.29	4.93			-6.11	7.21		
	Bank of Maharashtra	36.44	26.35			0.00	37.77		
	Canara Bank	35.41	37.56			44.66	18.57		
	Central Bank of India	0.50	55.22			-2.89	4.64		
	Indian Bank	9.16	6.57			17.00	11.56		
	Indian overseas Bank	3.07	10.00			6.37	8.80		
	Punjab and Sind Bank	0.00	0.00			0.00	0.00		
	Punjab national Bank	32.99	32.33			4.14	8.62		
	UCO Bank	0.00	0.00			0.00	0.00		
	Union Bank	34.52	18.94			4.70	49.6		

Source: Author's calculation **Significant @1% level of significance.

Kruskal Wallis test result for the variable Credit card growth. The P value for the pre-merger period was 0.006 and post-merger period was 0.002. Both the P values are lesser than the significance levels and rejects the null hypothesis. It indicates that during the study period there is a significant difference in the credit card of various public sector Banks in the growth of credit cards. In order to identify the exact

variations of SBI with other public sector Banks the pairwise comparison test has been conducted. The relevent part of the result is present below.

Table 6.56

Pairwise comparison test for public sector Banks on pre- post merger periods based on Credit Card Growth.

Banks		Pre-Merger (2014-2017)		Post-Merger (2019-2022)	
		Mean Rank	Sig.(P) value	Mean rank	Sig.(P) value
SBI	Bank of Baroda	24.75	1.000	44.25	1.000
	Bank of India	19.00	1.000	9.75	0.710
	Bank of Maharashtra	32.25	1.000	22.50	1.000
	Canara Bank	34.50	1.000	40.25	1.000
	Central Bank of India	18.00	1.000	10.25	0.820
	Indian Bank	25.00	1.000	31.50	1.000
	Indian overseas Bank	14.00	1.000	28.25	1.000
	Punjab and Sind Bank	9.00	1.000	15.00	1.000
	Punjab national Bank	38.50	1.000	20.75	1.000
	UCO Bank	9.00	1.000	15.00	1.000
	Union Bank	39.75	1.000	21.75	1.000

Source: Autor's calculation.

During the post-merger period, SBI and other public sector Banks had similar growth rates for their credit card services, as indicated by p-values of 1.000 for all listed Banks. This trend continued to post-merger phase , with most Banks still showing no significant difference from SBI, except for Central Bank of India, which had a p-value of 0.820 and Bank of India with P-value 0.710. Overall, most public sector Banks had credit card growth rates is similar to SBI.

Growth in Branches

Based on the Shapiro-Wilk normality test for the variable Growth in Branches, the P value was <0.001. Since the values during both periods are lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.57

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on Growth in Branches under Internal Business Process Perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Growth in Branches	State Bank of India	2.84	2.67	8.48	0.638	0.30	2.16	9.84	0.544
	Bank of Baroda	4.59	5.72			0.43	38.05		
	Bank of India	3.91	3.16			0.00	1.09		
	Bank of Maharashtra	0.45	5.55			2.26	4.16		
	Canara Bank	11.82	11.80			0.86	33.57		
	Central Bank of India	1.68	3.01			-0.75	0.66		
	Indian Bank	6.71	3.06			1.47	56.33		
	Indian overseas Bank	2.01	5.83			-0.96	0.58		
	Punjab and Sind Bank	4.50	9.85			0.41	0.16		
	Punjab national Bank	4.31	1.66			0.41	27.54		
	UCO Bank	3.19	4.35			-0.24	0.34		
	Union Bank	4.17	3.71			-0.23	59.83		

Source: Author's calculation

Kruskal Wallis test result for the variable Branch growth of selected public sector Banks during the pre-merger and post-merger periods shows that the obtained P values during both periods were 0.638 and 0.544, respectively. Both the values are higher than significance levels and retains the null hypothesis. It indicates that during the study period, the trend of Branch growth is same across the selected Banks.

Growth in ATM

Based on the Shapiro-Wilk normality test for the variable Growth in ATM, the P value was <0.001. Since the values during both periods are lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.58

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on Growth in ATM under Internal Business Process Perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Growth in ATM	State Bank of India	6.92	27.81	4.48	0.954	2.45	4.07	14.53	0.205
	Bank of Baroda	27.15	60.17			-0.85	21.79		
	Bank of India	37.78	44.90			-5.92	6.13		
	Bank of Maharashtra	1.06	81.55			2.45	4.30		
	Canara Bank	24.45	32.11			-2.45	29.24		
	Central Bank of India	20.97	20.19			-12.84	8.69		
	Indian Bank	19.90	22.38			9.70	9.78		
	Indian overseas Bank	20.37	21.37			-0.33	8.47		

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
	Punjab and Sind Bank	15.78	227.79			-6.33	19.05		
	Punjab national Bank	13.11	4.38			-1.45	26.17		
	UCO Bank	15.36	26.56			-3.52	5.84		
	Union Bank	9.21	17.88			-4.15	48.19		

Source: Author's calculation

Kruskal Wallis test result for the variable growth of ATM of selected public sector Banks during the pre-merger and post-merger periods shows that the obtained P values during both periods were 0.954 and 0.205, respectively. Both the values are higher than significant levels and retains the null hypothesis. It indicates that during the study period, the trend of ATM growth is same across the selected Banks.

Learning & Growth Perspective

H0: There is no significant difference in the Learning & Growth Perspective of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.

Growth in the Number of Employees

Based on the Shapiro-Wilk normality test for the variable growth in the number of employees, the P value was <0.001. Since P value is lesser than 0.05, the researcher has adopted Kruskal Wallis.

Table 6.59

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on growth in the number of employees under Learning& Growth perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Growth in the Number of Employees	State Bank of India	-1.90	1.53	9.65	0.333	-2.05	1.10	21.97	0.089***
	Bank of Baroda	2.29	7.33			-0.71	27.28		
	Bank of India	3.68	4.96			1.34	1.41		
	Bank of Maharashtra	-2.21	4.88			-0.65	2.36		
	Canara Bank	6.90	6.57			-0.19	25.55		
	Central Bank of India	-2.47	6.36			-4.79	1.70		
	Indian Bank	3.44	2.35			-2.54	62.71		
	Indian overseas Bank	2.75	6.28			-5.43	2.88		
	Punjab and Sind Bank	2.96	1.78			-1.06	1.41		
	Punjab national Bank	3.99	6.33			2.06	27.16		
	UCO Bank	0.76	3.96			-2.40	0.69		
	Union Bank	4.51	2.78			-0.30	55.41		

Source: Author's calculation ***Significance @ 10% level of significance

The table above displays the results of the Kruskal Wallis test for employee growth. The P value for the pre-merger period was 0.333, and for the post-merger period, it was 0.089. The P value for the post-merger period is significant at 10%. Hence, the null hypothesis was rejected. To identify the precise differences between SBI and

other public sector Banks during the post-merger period, a pairwise comparison test was conducted. The relevant portion of the findings is presented below.

Table 6.60

Pairwise comparison of public sector Banks on pre- post merger periods based on Growth in the Number of Employees.

Banks		Post-merger (2019-2022)	
		Mean Rank	Sig.(P) Value
SBI	Bank of Baroda	29.00	1.000
	Bank of India	38.75	1.000
	Bank of Maharashtra	29.25	1.000
	Canara Bank	33.75	1.000
	Central Bank of India	7.50	1.000
	Indian Bank	22.50	1.000
	Indian overseas Bank	11.75	1.000
	Punjab and Sind Bank	23.50	1.000
	Punjab national Bank	26.75	1.000
	UCO Bank	18.50	1.000
	Union Bank	30.25	1.000

Source: Author's calculation.

The table presents a pairwise comparison of the growth in the number of employees for the State Bank of India (SBI) with other public sector Banks during the post-merger period. The comparison is based on mean ranks and associated p-values.

For all pairwise comparisons between SBI and the other listed Banks, the p-value is 1.000. This indicates that there's no statistically significant difference in the growth in the number of employees between SBI and any of the other Banks during the post-merger period.

Expenses Per Employee

Based on the Shapiro-Wilk normality test for the variable expenses per employee, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis.

Table 6.61

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on Expenses Per Employee under Internal Business Process Perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Expenses Per Employee	State Bank of India	0.11	0.01	27.82	0.002**	0.20	0.03	23.97	0.016*
	Bank of Baroda	0.09	0.01			0.12	0.03		
	Bank of India	0.11	0.01			0.12	0.01		
	Bank of Maharashtra	0.11	0.01			0.15	0.02		
	Canara Bank	0.08	0.01			0.13	0.02		
	Central Bank of India	0.11	0.01			0.13	0.02		
	Indian Bank	0.10	0.01			0.14	0.02		
	Indian overseas Bank	0.09	0.01			0.14	0.02		
	Punjab and Sind Bank	0.10	0.00			0.15	0.03		
	Punjab national Bank	0.10	0.01			0.11	0.01		
	UCO Bank	0.07	0.01			0.10	0.03		
	Union Bank	0.10	0.01			0.10	0.02		

**Significant @1% level of significance. *Significant @5% level of significance.
Source: Author's calculation

Kruskal Wallis test result for the variable expenses per employee during pre-merger period and post merger period. 0.002 was the p value during the pre-merger period. P value for the post-merger period was 0.016. Both the values are significant at 1% and 5%. It rejects the null hypothesis and indicates that , there is a significant difference in the expenses per employees of various public sector Banks. In order to identify the exact variations of SBI with other public sector Banks regarding the variable expenses per employee the pairwise comparison test has been conducted. The relevent part of the result is present below.

Table 6.62

Pairwise comparison test of the public sector Banks on pre- post merger periods based on Expenses Per Employee.

	Banks	Pre-Merger (2014-2017)		Post-Merger (2019-2022)	
		Mean Rank	Sig.(P) value	Mean rank	Sig.(P) value
SBI	Bank of Baroda	15.63	1.000	19.13	0.588
	Bank of India	31.88	1.000	21.25	1.000
	Bank of Maharashtra	42.00	1.000	35.88	1.000
	Canara Bank	9.38	0.166	22.25	1.000
	Central Bank of India	30.63	1.000	22.00	1.000
	Indian Bank	22.50	1.000	28.13	1.000
	Indian overseas Bank	19.38	1.000	26.38	1.000
	Punjab and Sind Bank	28.13	1.000	35.13	1.000
	Punjab national Bank	26.88	1.000	14.63	0.140
	UCO Bank	3.38	0.018*	13.25	0.087***
	Union Bank	25.63	1.000	11.13	0.040*

*Significant @5% level of significance. ***Significant @10% level of significance.
Source: Autor's calculation.

This table provides a comparison of expenses per employee between SBI and other public sector Banks over two periods. During the pre-merger, UCO Bank was the only Bank that differed significantly from SBI, with a p-value of 0.018. During the post-merger, Union Bank and UCO Bank showed a significant difference from SBI with a p-value of 0.040 and 0.087 respectively, while most other Banks did not display statistically significant differences. Overall, most Banks did not differ significantly from SBI in terms of expenses per employee in both pre-and post-merger periods, except for a few exceptions as noted.

Social & Environmental Perspective

H0: There is no significant difference in the Social & Environment Perspective of SBI during the pre-merger (2014-2017) and post-merger phase (2019-2022), when compared with other selected public sector banks.

CSR Expenditure

Based on the Shapiro-Wilk normality test for the variable CSR Expenditure, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.63

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on CSR Expenditure under Social & Environment Perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
CSR Expenditure	State Bank of India	1.07	0.02	20.79	0.036*	1.57	0.82	23.25	0.016*
	Bank of Baroda	0.39	0.10			0.92	0.30		
	Bank of India	0.35	0.11			0.00	0.00		
	Bank of Maharashtra	0.17	0.17			0.67	0.87		
	Canara Bank	1.24	0.14			3.48	2.12		
	Central Bank of India	0.17	0.03			0.00	0.00		
	Indian Bank	0.22	0.12			0.30	0.14		
	Indian overseas Bank	0.02	0.01			0.01	0.00		
	Punjab and Sind Bank	0.25	0.26			0.49	0.00		
	Punjab national Bank	0.11	0.08			2.30	0.13		
	UCO Bank	0.28	0.21			0.55	0.00		
	Union Bank	0.46	0.26			0.55	0.64		

Source: Author's calculation *Significant @5% level of significance.

Kruskal Wallis test for the variable "CSR expenditure" of selected public sector Banks for the pre-merger and post-merger periods shows that the obtained P values during these periods were 0.036 and 0.016, respectively. Both values are statistically

significant and reject the null hypothesis. This indicates that during the study period, there was a difference in CSR expenditure across the selected Banks. To determine the exact variations of SBI with other public sector Banks in regard to CSR expenditure, a pairwise comparison test was conducted for the pre- and post-merger period. The relevant portion of the results is presented below.

Table 6.64

Pairwise comparison test result of public sector Banks on pre- post merger periods based on CSR Expenditure

Banks		Pre-Merger (2014-2017)		Post-Merger (2019-2022)	
		Mean Rank	Sig.(P) value	Mean Rank	Sig.(P) value
SBI	Bank of Baroda	27.50	1.000	32.50	1.0001
	Bank of India	18.63	0.764	14.50	0.121
	Bank of Maharashtra	23.00	1.000	25.25	1.000
	Canara Bank	36.63	1.000	30.25	1.000
	Central Bank of India	14.63	0.223	14.50	0.121
	Indian Bank	25.75	0.803	33.50	1.000
	Indian overseas Bank	12.88	0.124	18.13	0.447
	Punjab and Sind Bank	16.50	0.405	14.50	0.121
	Punjab national Bank	17.25	0.509	30.00	1.000
	UCO Bank	23.13	0.783	20.13	0.862
	Union Bank	34.63	1.000	18.63	0.529

Source: Author's calculation.

There were no statistically significant differences in CSR expenditure compared to SBI for all other Banks in both pre- and post-merger periods. Indicates that all Banks perform equally well in compare with SBI regarding CSR spending.

Branch Growth in Rural Areas

Based on the Shapiro-Wilk normality test for the variable branch growth in rural areas, the P value was <0.001. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis.

Table 6.65

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on Branch Growth in Rural Areas under Social & Environment Perspective.

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig. (P) value	Median	S. D	H-Statistic	Sig. (P) value
Branch Growth in Rural Areas	State Bank of India	1.98	4.80	6.22	0.858	1.10	0.90	13.00	0.293
	Bank of Baroda	5.04	13.32			0.12	25.93		
	Bank of India	5.31	3.71			-0.11	3.86		
	Bank of Maharashtra	0.77	6.44			0.00	0.28		
	Canara Bank	14.16	18.80			0.36	29.58		
	Central Bank of India	-0.03	7.92			0.00	0.18		
	Indian Bank	7.53	8.11			0.96	69.81		
	Indian overseas Bank	2.57	12.01			-0.65	0.30		
	Punjab and Sind Bank	14.58	11.49			0.71	0.50		
	Punjab national Bank	3.27	1.53			0.12	22.18		
	UCO Bank	3.65	7.40			0.05	25.42		
	Union Bank	3.78	7.45			-0.32	45.73		

Source: Author's calculation

The above table shows the results of Kruskal Wallis for the variable branch growth in rural areas of selected public sector Banks. The obtained P value during the pre-merger and post-merger periods was 0.858 and 0.293 respectively. Both the values are higher than the significance levels. Hence, retains the null hypothesis. It indicates that during the study period, the trend of branch growth in rural areas is same across the selected Banks.

Priority Sector Advances Ratio

Based on the Shapiro-Wilk normality test for the variable priority sector advances, the P value was 0.014. Since the P value is lesser than 0.05, the researcher has adopted Kruskal Wallis test.

Table 6.66

Kruskal Wallis test result of public sector Banks on pre- post merger periods based on priority sector advances under Social & Environment Perspective.

Variable	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
Priority Sector Advances	State Bank of India	22.34	0.62	32.55	<0.001**	23.44	0.58	40.90	<0.001**
	Bank of Baroda	23.17	2.60			29.00	1.30		
	Bank of India	23.37	2.77			33.09	2.10		
	Bank of Maharashtra	36.10	1.47			40.74	4.40		
	Canara Bank	35.44	4.08			45.22	2.54		
	Central Bank of India	39.50	6.64			52.25	2.58		
	Indian Bank	36.33	3.65			42.64	3.52		
	Indian overseas Bank	36.00	3.73			56.22	6.69		

Variables	Banks	Pre-Merger (2014-2017)				Post-Merger (2019-2022)			
		Median	S. D	H-Statistic	Sig.(P) value	Median	S. D	H-Statistic	Sig.(P) value
	Punjab and Sind Bank	30.07	4.46			41.12	3.02		
	Punjab national Bank	33.78	1.88			34.10	1.72		
	UCO Bank	33.84	2.20			42.12	2.71		
	Union Bank	34.57	2.66			39.10	2.31		

Source: Author's calculation ** Significant @1% level of significance.

Kruskal Wallis test result for the variable priority sector lending during the pre-merger and post-merger periods shows that the P values for both the periods were <0.001.Since both the P values are lesser than significance levels, rejects the null hypothesis and indicates that , there is a significant difference in the mean scores of various public sector Banks regarding priorty sector lending. In order to identify the exact variations of SBI with other public sector Banks the pairwise comparison test has been conducted. The relevent part of the result is present below.

Table 6.67

Pairwise comparison test result of public sector Banks on pre- post merger periods based on Priority Sector Advances.

	Banks	Pre-Merger (2014-2017)		Post-Merger (2019-2022)	
		Mean Rank	Sig.(P) value	Mean Rank	Sig.(P) value
SBI	Bank of Baroda	7.50	1.000	6.75	1.000
	Bank of India	6.00	1.000	13.75	1.000
	Bank of Maharashtra	34.50	0.263	24.50	1.000
	Canara Bank	31.50	0.660	36.25	0.043*
	Central Bank of India	40.50	0.032*	43.75	0.002**
	Indian Bank	35.75	0.175	30.00	0.361

Banks	Pre-Merger (2014-2017)		Post-Merger (2019-2022)	
	Mean Rank	Sig.(P) value	Mean Rank	Sig.(P) value
Indian overseas Bank	33.25	0.390	44.75	0.001**
Punjab and Sind Bank	21.75	1.000	24.25	1.000
Punjab national Bank	25.75	1.000	13.75	1.000
UCO Bank	25.00	1.000	29.50	0.421
Union Bank	26.50	1.000	24.25	1.000

**Significant @1% level of significance. *Significant @5% level of significance.
Source: Author's calculation.

During the pre-merger period, Priority Sector Advances Ratio of SBI is statistically significant with Central Bank of India. The p-value was 0.032. However, all other Banks were not statistically different from SBI.

In the post-merger period, Canara Bank, Central Bank of India, and Indian Overseas Bank showed significant differences with SBI. The p-values were 0.043, 0.002, and 0.001, respectively. No other Banks demonstrated a significant difference from SBI during this period.

CHAPTER 7

FINDINGS AND CONCLUSIONS

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7.1 Introduction

The chapter provides a brief summary of a study and highlights the main findings of the analysis. The findings are organized under different subheadings such as market concentration and competition of Indian public banking sector, corporate governance and disclosure pattern of SBI and other selected public sector banks under the dimensions of Board effectiveness, audit function, Risk management, remuneration committee, shareholder's rights and information and disclosure and transparency, and finally the overall corporate performance of SBI and other public sector banks under the perspectives of Financial, customer, learning and growth, internal business processes and social and environment. Later, suggestions are given based on the findings and concluded the chapter.

7.2 Summary

In today's banking sector, mergers and acquisitions (M&A) have become a crucial aspect of strategic initiatives. They allow banks to reach their goals and foster growth. Currently, there is a considerable focus on M&A activities taking place in the financial services industry, indicating their importance and relevance in the current economic landscape. The study has been conducted with this background and titled "The impact of mergers and acquisitions on corporate governance and performance: A comparative study of SBI and other selected public sector banks"

In the literature review chapter, a comprehensive summary of past studies related to the topic was provided. Through this review, research gaps were identified, and these were highlighted. On the other hand, the theoretical framework chapter digs into the major theories that are relevant to the topic. Additionally, various variables were

identified in the literature and their relationships were discussed. Based on these variables and their relationships, a conceptual model was created. The main objective of this study is to address the following specific research questions related to the topic.

- To what extent SBI's merger 2017 have altered the market concentration and competition level of Indian public banking sector?
- Whether SBI showcased any improvement in the corporate governance disclosure practices after the merger?
- Is SBI the leading public sector bank in terms of corporate governance compliance practices after the merger?
- Is there any improvement in SBI's corporate performance compared to other public sector banks after the merger?

To find answer to the above questions, researcher has developed the following objectives.

1. To identify the impact of SBI's mega merger on competition and concentration in the banking industry.
2. To measure the corporate governance compliance practices of state bank of India during pre- merger and post-merger period.
3. To compare corporate governance compliance practices of State bank of India with other public sector banks.
4. To analyze the overall corporate performance of the State Bank of India during the pre-merger and post-merger periods.
5. To compare the corporate performance of State bank of India with other public sector banks.

7.3 Findings

The major findings of the study are described in the following order.

7.3.1 Market Concentration & Competition of Indian Public Banking Sector.

- During the entire study period, the State Bank of India had the highest percentage of shares in each variable compared to other selected banks.
- As a result of the SBI merger, there were significant increases in concentration levels across all variables from 2017 to 2018. In terms of assets, deposits and loans CR3 rose from 42% to 52%, 40% to 50% and 43% to 50% respectively. Assets deposits and loans of CR5 went up from 55% to 61%, 53% to 60% and 55% to 62% respectively.
- During 2017, CR3 and CR5 of all variables indicated low market concentration with perfectly competitive market conditions. However, following the SBI merger in 2018, the CR3 and CR5 of assets, deposits, and loans showed moderately concentrated markets with oligopoly market conditions.
- HHI score of assets, deposits and loans also experienced a notable jump from 1072 to 1476, 960 to 1376 and 1103 to 1455 respectively from 2017 to 2018. While observing the HHI score in both timeframes 2017 and 2018, there is an unconcentrated market with perfect market competition. But the HHI score in 2018 had a dramatic increment compared with the year 2017, and they are moving very close to the oligopoly market condition.
- Comparing the years 2017 and 2018 with the previous and subsequent years highlights the significant impact of the SBI merger. Although public banking sector concentration continued to increase from 2014 to 2022, the rate of increase was less dramatic compared to the jump observed between 2017 and 2018. For instance, by 2022, Assets CR3 had reached 60%, which reflected an aggregate 11% increase over four years, in contrast to the 7% rise observed from 2017 to 2018 alone. Similarly, HHI for assets climbed by a total of 538 points from 2018

to 2022, whereas the increase between 2017 and 2018 was 404 points in just a single year.

- In the subsequent years after the SBI merger, there were many other bank mergers and the number of public sector banks reduced to 12 in 2022 and it was 27 in the year 2014.

- While observing the 9-year banking concentration from the year 2014 to 2022, During the year 2014 the CR3 of the variables' assets, deposits and loans were 38%, 37% and 39% respectively. The CR5 of assets, deposits and loans were 51%, 50% and 52% respectively. The HHI score of these variables were 847, 800 and 890 respectively. The CR3, CR5 and HHI scores indicates unconcentrated market with perfectly competitive marketplace.

- While observing the year 2022, the CR3 of the variables assets, deposits, and loans was 60%, 58%, and 60%, respectively. The CR5 of assets, deposits, and loans were 79%, 78%, and 80%, respectively. The HHI scores for these variables were 2014, 1924, and 2006, respectively. The CR3, CR5, and HHI scores indicate a moderately concentrated marketplace with oligopoly market competition. However, CR5 values alert that any further merger in the public banking sector leads to a highly concentrated market with a monopoly type of competition. While observing the CR5 values, it is clear that the top five banks in the industry already dominate the assets, deposits, and loan market by capturing almost 80% of the market share.

- In conclusion, while the pre-merger period 2014-2017 exhibited a more balanced competitive landscape, the post-merger years 2019-2022 exhibited a clear shift towards increased concentration, hinting at reduced competition and greater dominance by the few top firms in the financial sectors of assets, deposits, and loans.

7.3.2 Corporate governance compliance pattern of SBI.

- SBI's overall corporate governance compliance percentage has increased from 84.5% during the pre-merger period (2014-2017) to 91% during the post-merger period (2019-2022). There is an improvement of 6.5% in the post-merger phase.
- There was a visible increase in the dimension board effectiveness compliance scores of SBI, moving from an average of 72.3% in the pre-merger period to 78.5% post-merger. But comparing with other dimensions board effectiveness shows very low compliance score. All other dimensions have above 80% disclosure score in both pre- and post-merger phase.
- The dimensions of Risk Management and Shareholders' Rights and Information of SBI have achieved complete compliance rate of 100% in the post-merger period. in the pre-merger phase, their compliance rates were 80% and 95%, respectively.
- The most noticeable improvements in governance compliance were seen in the dimensions of Risk Management and the Remuneration Committee of SBI. In the post-merger period, both these dimensions had 20% and 15% of improvement and achieved 100% and 95% compliances respectively.
- The compliance percentage of the audit function dimension of SBI increased to 87.5% in post-merger from 84.4% in pre-merger.
- The disclosure & transparency dimension of SBI remained consistent in both periods with 96.9% compliance.
- In the post-merger phase (2019-2022), SBI has made significant improvements in its overall corporate governance compliances. Although the Disclosure & Transparency dimension remained consistent without any improvement, the bank has prioritized Risk Management and Shareholders' rights & information, achieving complete disclosure in these areas.

- Overall, SBI's corporate governance compliance and disclosures have improved across most dimensions. The highest improvement observed in the dimensions compared with the pre-merger period was the risk management dimension and remuneration committee dimension. Both dimensions had high improvements of 20% and 15% during the post-merger phase.

- It is found that the corporate governance compliance practices of SBI during the pre-merger and post-merger periods are statistically significant. So, it can be concluded that the improvement in the corporate governance compliance score of SBI during the pre-merger (2014-2017) and post-merger (2019-2022) periods is statistically significant.

7.3.3 Comparison of Corporate Governance Compliance Pattern of SBI with Other Public Sector Banks.

- It has been found that there is no significant difference in the overall corporate governance compliance scores of SBI with other public sector banks in both periods (2014-2017 and 2019-2022). This suggests that the corporate governance compliance scores, compared are generally similar across all banks in comparison to SBI in both periods. Hence, merger that happened in SBI on 2017 do not give any distinctive advantage or disadvantage to SBI compared with other public sector banks regarding its Corporate Governance.

7.3.4 Comparison of Corporate Governance Dimension Wise Compliance Scores of SBI with other Public Sector Banks.

Board effectiveness

- In the pre-merger phase (2014-2017), SBI’s compliance percentage in the dimension board effectiveness was 73.2% and in the post-merger period it increased to 78.6% by improving 5.4%.

- In the pre-merger phase, the highest compliance percentage in the dimension board effectiveness was achieved by the Bank of India with 82.1% compliance, while the Central Bank secured the least at 60.7% compliance.
- In the post-merger phase (2019-2022), Bank of India maintained its highest compliance percentage with 94.6% of compliance, while Union Bank secured the least position with 60.7% compliance.
- It has been found that, there is no statistically significant difference in the board effectiveness dimension of SBI with other public sector banks in both timeframes.

Audit function

- During both the pre-merger and post-merger phases, the audit function compliance scores of SBI was 84.4% and 87.5% respectively.
- In the pre-merger phase, the highest compliance percentage in the dimension audit function was achieved by BOM and PNB with perfect 100% compliance, while the Union Bank had the lowest score with a 71.9% compliance percentage.
- In the post-merger phase, Punjab National Bank maintained its highest compliance rate of 100% compliance, while the UCO Bank had the lowest score with a 68.8% compliance percentage.
- It has been found that, there is no statistically significant difference in the audit function dimension of SBI with other public sector banks during the observed timeframes.

Risk management

- In the pre-merger phase, SBI's compliance percentage in the dimension risk management was 80% and in the post-merger period it increased to 100% by improving 20%.
- In the pre-merger phase, the highest compliance percentage in the dimension risk management was achieved by Canara with 90% compliance. The lowest risk management compliance percentage was recorded by Union Bank, Punjab & Sind

Bank, Indian Overseas Bank, and Bank of Maharashtra, with a score of 60% respectively.

- In the post-merger phase, SBI and BOB are leading in risk management with a perfect score of 100%. while the Bank of Maharashtra had the lowest score with a 65% compliance.

- It has been found that, in the pre-merger (2014-2017) period there is no statistically significant difference in the risk management dimension of SBI with other public sector banks. In the post-merger phase (2019-2022) Bank of Maharashtra and Union Bank showed significant deviations from SBI's risk management performance.

- By observing the mean rank of Bank of Maharashtra and union bank, it can be concluded that both these banks had very low risk management compliance scores compared to SBI. Their risk management compliance percentage were 65% and 70% respectively and SBI's risk management compliance percentage was 100%.

Remuneration committee

- In the pre-merger phase, SBI's compliance percentage in the dimension remuneration committee was 80% and in the post-merger period it increased to 95% by improving 15%.

- In the pre-merger phase, the highest compliance percentage in the dimension remuneration committee was achieved by Bank of Maharashtra and Indian bank with perfect 100% compliance. The least compliance score was 45% by Bank of India.

- During the post-merger phase, none of the banks attained 100% compliance. By scoring 95% compliance, State Bank of India, and central bank are in the first place. The 40% compliance were the least scored in this phase by Indian overseas bank.

- Most public sector banks do not display any significant difference in their remuneration committee dimension when compared to SBI in both periods. In the

post-merger phase, Indian Overseas Bank shows some variation from SBI, but it is not statistically significant.

- It has been found that, there is no statistically significant difference in the remuneration committee dimension of SBI with other public sector banks during the observed timeframes.

Shareholder’s rights & information

- In the pre-merger phase, SBI’s compliance percentage in the dimension shareholder’s rights & information was 95% and in the post-merger period it increased to 100% by improving 5%.
- During the pre-merger period, five banks – Bank of Baroda, Bank of India, Bank of Maharashtra, Canara, and Indian Overseas Banks - scored a perfect 100% under the shareholder’s rights & information dimension. The central bank had the lowest compliance rate of 82.5%.
- In the post-merger period, eight banks, namely State bank of India, Bank of Baroda, Bank of India, Bank of Maharashtra, Canara bank, Indian Overseas bank, and Punjab & Sind Bank, achieved a flawless score of 100%. Notably, there has been a significant improvement in the dimension of shareholder’s rights & information. The lowest compliance rate for this period was 90% by Indian Bank and the central bank.
- It has been found that, the selected public sector banks did not show any significant difference in terms of shareholders' rights and information dimension when compared to SBI in both periods.

Disclosure &Transparency

- In both the pre-merger and post-merger phase, SBI’s compliance percentage in the dimension disclosure & transparency was 96.9%.
- During the pre-merger period, every bank showed exceptional levels of transparency and disclosure. BOI, Canara Bank, Central Bank, Indian Bank,

Indian Overseas Bank, PNB, and Union Bank received perfect scores of 100%. The remaining banks scored above 92%.

- In the following period, during the post-merger phase, all banks attained scores of 100%, except SBI, which scored 96.9%.
- During the pre-merger (2014-2017) and post-merger (2019-2022) periods, none of the public sector banks differ significantly from SBI in terms of their transparency and disclosure practices. All banks were similar with SBI in this regard.

7.3.5 Corporate Performance of SBI During the Pre-Post Merger Period and comparison with other public sector Banks.

- When comparing corporate performance of SBI during the pre-post merger periods, there is a declining trend in the post-merger averages.

Financial Perspective

- Under the financial perspective, all variables were decreased during the post-merger except CAR. There is an improvement of 13.34 % CAR in the post-merger phase from 12.67% CAR in the pre-merger phase. It is found that the improvement in the CAR is statistically significant.
- There were huge differences of Statistically Significant decrease in the Credit Deposit ratio during the post-merger period.
- In the post-merger phase Net NPA to Advances ratio shows decreasing trend, which is positive to the Bank though the difference isn't statistically significant. Even after the merger SBI managed well their NPA and reduced it to the maximum within the short span of time. Post-merger NPA was peek in 2019 with 3.01%, immediately after merger. It reduced to 1.09% in 2022.
- Other variables Cash deposit ratio, NIM, ROA and ROE reduced their performance during the post-merger phase and the difference is not statistically significant.

- When comparing SBI's Financial perspective performance with other public sector banks, it is found that during the pre-merger phase SBI secured first position for all variables. SBI had good Net Interest Margin comparing with other banks. Because, BOB, BOI, Canara Bank, IOB and PSB had very low NIM compared to SBI, and their variation is statistically significant with SBI. But in the post-merger phase SBI's position for NIM fall down to 4th and no banks were statistically significant.
- Regarding Cash Deposit Ratio and Credit Deposit Ratio, during the pre-merger period BOB and UCO were statistically significant with SBI. In the post-merger period Central Bank were statistically significant with SBI.
- Indian Bank and IOB showed statistical Significance with SBI for the variable CAR during the Pre-merger period.
- In the post-merger phase SBI was unable to maintain its first position for all variables. Net NPA to Advances, ROA and ROE maintained first place in the post-merger period as well. But none of the Banks were statistically significant regarding these variables.

Customer Perspective

- CASA ratio and Current Account Growth has shown increasing trend in the post-merger period.
- All other variables Deposit Growth, Credit Growth, Savings Account Growth, and Complaint redressal ratio shown decreasing trend in the post-merger phase.
- Increase in CASA ratio and decrease in Complaint redressal ratio shows statistical significance. 42.86% was the pre-merger CASA ratio and it increased to 44.87% in the post-merger with reduced volatility. The pre-merger Complaint Redressal Ratio was 98.10% and it reduced to 95.70% in the post-merger.
- When comparing SBI's Customer Perspective Performances with other public sector banks, Deposit Growth, Credit Growth and CASA ratio has secured first position.

- SBI has maintained very good CASA ratio than other banks. BOB, BOI, Canara Bank, Indian Bank, IOB, PSB, UCO Bank and Union Bank were statistically significant with SBI's CASA ratio. Similarly, during the post-merger phase also Except UCO Bank all these banks were statistically significant with SBI. All these banks have low CASA ratio compared to SBI.

- In the post-merger phase SBI's Complaint redressal system fell into the last among Public Sector Banks. PSB and PNB's complaint redressal system is statistically significant with SBI during the post-merger phase. These banks have really high Complaint redressal system than SBI.

Internal Business Process Perspective

- There was a statistically significant reduction in the Total Business Growth and Advertisement Cost to Total business. 12.63% was pre-merger total business growth and it reduced to 9.96% in the post-merger phase. 0.009% was the pre-merger advertisement cost to total business and it reduced to 0.005%.

- Since there is a significant reduction in the total business growth of SBI, reduction of the Advertisement cost to total business cannot be considered as positive sign. Otherwise, it could be an advantage to the firm.

- Other variables Credit card Growth has increasing trend in the post-merger. But not statistically significant. Debit card Growth, Branch Growth in rural areas and Growth in ATM shows reduction during the post-merger.

- When comparing with other Public Sector Banks, During the pre-merger phase SBI had the highest Total Business Growth. Butit couldn't maintain it on the post-merger phase.

- Advertisement cost to Total business of SBI is statistically significant with IOB during the post-merger phase. IOB had very low Advertisement cost to Total business. Except this none of the banks were statistically significant with SBI under the perspective internal business process in both periods.

Learning and Growth Perspective

- There is a statistically significant increase in the expenses per employee during post-merger phase.
- Growth in the number of employees of SBI shows negative growth in both pre- and post-merger with no statistical significance.
- When comparing with other public sector banks, in both periods SBI secured and maintained first position regarding the Expenses per employee. In the pre-merger phase UCO bank and in the post-merger phase UCO bank and Union Bank were statistically significant with SBI. These banks had low Expenses per employee score compared to SBI.
- SBI had negative growth of employees in both periods.

Social and Environment

- CSR expenditure and Priority sector advances shows slightly increasing trends and Branch growth in rural area is in declining way. But none of the variations is statistically significant.
- When comparing with other public sector banks, SBI's branch growth in rural areas were last during the pre-merger period. But in the post-merger period, Branch growth in rural areas of SBI reached firs position. But this variation is not statistically significant.
- In both pre-post-merger period SBI had lowest Priority Sector Advances ratio. During the pre-merger period, Central bank showed a statistical significance. In the post-merger Phase Canara Bank, Central Bank and IOB showed statistical significance with SBI regarding Priority Sector Advances. All these banks had Highest Priority Sector Advances ratio than SBI.

7.4 CONCLUSIONS

The major conclusions derived from the above findings are given below:

- India's public banking sector is moving from a moderately concentrated oligopolistic market to a highly concentrated monopoly market. During the phase 2014-2017, there was still some competition among banks, but after the State Bank of India merged with its associate banks and Bhartiya Mahila Bank in 2017, the number of public sector banks decreased to 20 from 27. Over time, further mergers, acquisitions, and consolidations reduced the number of public sector banks to 12 by 2022. This trend has raised concerns about the increased market concentration and competition. Rising concentration ratios and HHI values suggest that the market structure has become moderately concentrated oligopoly competition. While observing the CR5 values in 2022, it is clear that the top five banks in the industry dominate the assets, deposits, and loan market by capturing almost 80% of the market share. Hence, CR5 values alert that any further merger in the public banking sector leads to a highly concentrated market with a monopoly type of competition. This could lead to reduced competition and give these banks more power over factors like prices, service quality, and market dynamics. This could potentially impact both Indian banking consumers and the overall health of the banking system.
- When examining SBI's CG compliance percentages from 2014 to 2022, it is evident that their compliance scores are impressive. During the pre-merger period (2014-2017), SBI's average compliance percentage was 84.5%, and it increased to 91% in the post-merger phase (2019-2022). It is a noticeable significant improvement. However, several other banks surpassed SBI in terms of their CG compliance in both periods. Banks such as BOB and BOI reported higher average compliance percentages of 94.5% and 92% respectively in the post-merger (2019-2022) period. So, comparing with these banks SBI needs to perform much better to reach the first position. It is evident that the merger did not affect negatively SBI's corporate governance path though SBI has enhanced its CG compliance practices following the merger.

- The State Bank of India (SBI) is a prominent institution in the Indian banking sector, known for its size and importance. As the largest public sector bank in the country and classified as "too big to fail," it is expected to lead in corporate governance practices. The discrepancy in dimension wise Corporate Governance compliance scores highlights areas where SBI can improve, particularly given its significant role in the country's financial ecosystem. During pre-merger phase, none of the CG dimensions of SBI outperformed compared with other banks. In the post-merger phase, risk management and shareholders' rights & information dimensions scored 100% compliance. In both phases, the board effectiveness dimension had the lowest compliance score though it increased during post-merger. The audit function dimension showed 3.1% increase in post-merger. The disclosure and transparency dimension remained constant in both periods with 96.9% compliance.

- In the post-merger phase, only the risk management dimension of the State Bank of India (SBI) is statistically significant with Bank of Maharashtra (BOM) and Union Bank. This indicates that both BOM and Union Bank have lower risk management compliance than SBI. Interestingly, all other banks perform similarly to SBI in other corporate governance dimensions. Therefore, it can be concluded that the 2017 SBI merger did not provide any unique advantages or disadvantages to SBI regarding corporate governance compliance when compared to other banks.

- The dimensions to which SBI needs to give more importance are Audit Committee and board effectiveness. In both periods, SBI had the lowest disclosure percentage in board effectiveness dimensions when compared with other CG dimensions of SBI. In the post-merger period, the Audit Committee and board effectiveness compliance scores of SBI was 87.5% and 78.6%. In the post-merger phase, all banks except SBI (96.9%) secured a 100% compliance regarding disclosure and transparency. Although the disclosure score of 96.9% achieved by SBI is commendable, there is a need for the bank to focus on enhancing its disclosure and transparency dimension as well. A comparative analysis of other banks'

performances indicates that SBI has room for improvement in this area. Therefore, it is recommended that SBI takes appropriate measures to bolster its transparency practices, which would further enhance its credibility and reputation in the market.

- After the merger, the State Bank of India (SBI) experienced mixed results in its Key Performance Indicators (KPIs). On the positive side, there was a statistically significant improvement in three areas: the Capital Adequacy Ratio (CAR), which indicates that SBI has strengthened its financial position and has a higher capacity to absorb potential losses, making it a safer environment for depositors and stakeholders. The CASA ratio, from a customer perspective, indicates a more cost-effective deposit mix. The increase in the CASA ratio indicates that a larger portion of the bank's deposits are now in the form of current and savings accounts, which typically carry lower interest costs than term deposits. This shift can positively affect the bank's net interest margins. Lastly, there was an improvement in the Expenses per Employee from the Learning and Growth perspective, suggesting enhanced operational efficiency. The bank has reduced the number of employees and increased spending towards them.

- The bank faced a statistically significant decline in certain sectors after the merger. It experienced a decrease in key performance indicators such as the Credit Deposit Ratio from a financial perspective. This drop could mean that the bank's lending operations have slowed down compared to its deposit collection, indicating a more cautious lending approach or reduced credit demand. In addition, metrics such as Total Business Growth and the Advertisement Cost to Total Business from the Internal Business Process Perspective raise concerns about the bank's growth and marketing investments. Although a decrease in advertisement expenses may seem beneficial at first, it could indicate that reduced advertising spending is affecting business growth when viewed in the context of a decrease in overall business. Furthermore, the decline in the Complaint Redressal Ratio from the Customer Perspective may indicate deficiencies in managing customer grievances, which could affect customer trust and satisfaction.

- During the pre-merger phase, SBI was in the first position in all financial perspective performance indicators when compared to other public sector banks. However, post-merger, this leadership was somewhat compromised. While SBI still managed to lead in some key performance indicators like Net NPA to Advances (indicating a healthy loan portfolio with the least non-performing assets), as well as Return on Assets (ROA) and Return on Equity (ROE). It lost its leading position in some other vital areas. Although there was a significant improvement in the CAR during the post-merger phase, SBI lost first place when compared to other banks.

- Following the merger, SBI's performance in terms of the cash deposit ratio and credit deposit ratio was significantly aligned with that of the central bank. However, after closer examination, it was revealed that the Central Bank of India had outperformed SBI with a superior cash deposit ratio and a more conservative credit deposit ratio. This indicates that the Central Bank of India has a more liquid position and a cautious lending strategy as compared to SBI. However, none of the banks showed a significant difference with regard to the remaining financial performance indicators of SBI. This suggests that all banks have similar performance to SBI in terms of the remaining variables.

- During the pre-merger phase, SBI secured a leading position on three major metrics from a customer perspective: Deposit Growth and, more notably, the CASA (Current Account and Savings Account) ratio. The CASA ratio is a significant metric as it indicates the bank's ability to maintain a healthy balance of more stable and low-cost funds from depositors. However, in the post-merger phase, SBI lost its leading position in all performance indicators.

- In the post-merger, SBI's strength in maintaining a robust CASA ratio compared to other banks becomes evident. In fact, peer banks such as BOB, BOI, Canara Bank, Indian Bank, IOB, PSB, and Union Bank showed a statistically significant difference in their CASA ratios in comparison to SBI. Found that all these banks had lower CASA ratios than SBI. This disparity underscores SBI's proficiency in

maintaining a large and stable deposit base, which is typically viewed as favorable banking practice.

- However, one area of concern that arose after the merger was the bank's complaint redress system. This customer service metric shows that SBI has fallen to the last position among public sector banks. In particular, two banks, PSB and PNB, have shown complaint redressal systems that are not only statistically significant but also superior in performance compared to SBI during the post-merger phase. It is crucial for SBI to improve their customer service to maintain trust and compete with other public sector banks in the post-merger phase.

- The internal business process perspective of the State Bank of India (SBI) showed exceptional leadership in terms of Total Business Growth during the pre-merger phase. However, after the merger, SBI lost its top position in this metric. In addition, analysis after the merger revealed a significant difference in the ratio of Advertisement cost to Total business between SBI and IOB. IOB maintained a much lower ratio than SBI. Other than this difference with IOB, SBI's performance in internal business processes remained consistent and comparable to other public sector banks in both pre and post-merger periods.

- Among public sector banks, SBI held the top position for expenses per employee in both time periods analyzed. During the pre-merger phase, UCO bank was statistically significant with SBI, while during the post-merger phase, both UCO bank and Union Bank were statistically significant with SBI, as they had lower expenses per employee compared to SBI.

- It was found that during the pre-merger period, SBI had the lowest branch growth compared to other public sector banks in rural areas. However, post-merger, SBI reached the first position in branch growth in rural areas. It is important to note that this variation is not statistically significant.

- In both pre and post-merger period, SBI had the lowest Priority Sector Advances ratio. During the pre-merger period, only Central Bank showed statistical significance in this regard. However, in the post-merger phase, Canara Bank,

Central Bank, and IOB showed statistical significance with SBI regarding Priority Sector Advances. All of these banks had a higher Priority Sector Advances ratio than SBI.

- During the pre-merger phase, SBI was dominant in many corporate performance indicators. However, after the merger, SBI's dominance has reduced in most areas, except for a few such as expenses per employee, net NPA to advances (which is the lowest), ROA, ROE, and CASA ratio. It is essential for SBI to focus on improving its complaint redressal system and priority sector advances. These are the areas where SBI has the lowest performance compared to other banks.

CHAPTER 8

RECOMMENDATIONS, IMPLICATIONS AND SCOPE FOR FURTHER RESEARCH

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8.1 Recommendations

This chapter deals with recommendations derived from the findings and conclusions of the present research work. Further, the implications of the research work and the scope for further research are presented in this chapter.

Recommendations

The following are the recommendations suggested based on the findings and conclusion.

1. After analyzing the data, it was discovered that in the public banking industry, there is a concern of growing concentration of power and decrease in competition, resulting in greater dominance by a small number of top firms. Any additional mergers and acquisitions within this sector would exacerbate this issue, leading to an even higher degree of market control in the hands of only a few banks.

2. SBI's overall corporate governance compliance and disclosure score improved after the merger while comparing with pre-merger period. However, certain areas, such as board effectiveness, audit function, and disclosure and transparency dimensions, require special attention because they have not shown as much improvement as other dimensions of corporate governance.

3. Similarly, other public sector banks such as BOB, PNB, and Punjab & Sind Bank possess higher overall CG compliance scores than SBI in both periods. Hence, SBI should take a proactive approach to enhancing its corporate governance framework. By learning from banks with higher CG compliance scores and implementing global best practices, SBI can significantly elevate its governance

standards, boosting stakeholder trust and long-term sustainability. Effective corporate governance is essential for the long-term success of any bank, enhancing accountability, transparency, and stakeholder trust.

4. Among public sector banks, SBI's dominance has reduced in many corporate performance metrics. However, it faces challenges in its complaint redressal ratio and priority sector advances ratio. To improve its complaint redressal system, SBI should prioritize it, train its staff to effectively resolve complaints, and analyze recurring issues to tackle their root causes. To improve its priority sector advances ratio, SBI should design more tailored loan products that cater specifically to these priority sectors. These efforts will help SBI maintain its leadership position in the banking sector and improve its performance in these specific metrics.

8.2 Implications of the Study

Implications for Policymakers and Regulators:

1. Monitor Market Concentration:

Policymakers should regularly assess market share distribution among public banks to promote a competitive landscape. If necessary, they may need to reconsider or tighten the criteria for permitting further mergers in the sector.

2. Enhanced Scrutiny of Governance:

Regulators should prioritize auditing and reviewing areas of corporate governance that have not improved after a merger, such as board effectiveness, audit functions, and transparency measures.

3. Customer-Centric Banking Norms:

Regulators may introduce stricter norms or guidelines for SBI's customer service to address the highlighted concern about the complaint redressal ratio. This may include response time and resolution standards, as well as periodic audits of the redressal system.

4. Monitoring Priority Sector Advances:

Policymakers should closely monitor advances in the priority sector, as it plays a crucial role in overall economic development. Banks that fall behind in this area may face penalties.

Implications for managers or Top Executives:

1. Strengthening corporate governance:

Corporate governance in areas with less improvement should be prioritized by top executives. This enhances stakeholder confidence and mitigates risks.

2. Regular Reporting and Transparency:

Mandate regular reporting of key performance metrics, particularly areas where banks are falling behind, to ensure prompt corrective action and keep stakeholders informed.

8.3 Scope for Further Research

There is significant potential for further research in the Indian banking sector, particularly regarding the merger of SBI. The following topics are suggested for further research:

- The impact of SBI merger on corporate governance and performance.
- The impact of regulations on mergers and acquisitions in the banking sector.
- Explore how mergers can strategically benefit banks in gaining a competitive advantage.
- Examine the difficulties that banks encounter when merging two different organizational cultures.
- Examine the outcomes of major bank mergers in recent decades, assessing both their successes and failures.

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APPENDIX

Appendix- 1

Corporate Governance Index (CGI)

Governance dimension	Variables	Score 1 (Full compliance)	Score 0.05 (Partial Compliance)	Score 0 (No Compliance)
Board effectiveness (14)	The bank has established a code of corporate governance.			
	Every board member and senior management signs a certificate establishing the 'code of conduct' policies.			
	At least 50% of the board is made up of non-executive directors.			
	At least one women director.			
	A minimum of 4 board meetings are held in a year.			
	Executive directors should not hold directorship or chairmanship positions in more than three listed companies.			
	The Chairman of the board is a non-executive(independent)director.			
	If the chairman of the board is a non-executive director, then at least one-third of the board of directors should consist of independent directors. If the chairman is an executive director, then at least half of the board of directors should consist of independent directors.			
	There are two distinct individuals holding the positions of CEO and chairman of the board.			
	The bank discloses information about its independent directors in its report or on its website, as			

Governance dimension	Variables	Score 1 (Full compliance)	Score 0.05 (Partial Compliance)	Score 0 (No Compliance)
	they are already acquainted with the bank.			
	During each financial year, a separate meeting of independent directors takes place. If details of the meeting are disclosed in the report, a score of 1 is given. However, if a meeting is held but details are not provided, a score of 0.5 is given.			
	The bank shares information regarding the committee's foon, purpose, and members, particularly those who are independent, in the corporate governance report. A score of 0.5 is given if only some of the details are disclosed.			
	As part of the annual report of the bank, the board of directors publishes separate corporate governance reports.			
	The Board constitutes a nomination committee for the appointment of directors.			
Audit committee (8)	The Board constitutes an audit committee.			
	Minimum three directors as members of the committee.			
	Minimum 2/3rd members of the committee are independent directors.			
	The chairman of the committee is a non-executive director.			
	The Committee meets at least four times a year.			
	The company secretary acts as secretary to the audit committee.			

Governance dimension	Variables	Score 1 (Full compliance)	Score 0.05 (Partial Compliance)	Score 0 (No Compliance)
	Statutory auditors are appointed by the board.			
	Banks are required to obtain a certificate from either auditors or practicing company secretaries to confirm compliance with corporate governance conditions. This certificate should be disclosed in the annual report.			
Risk management (5)	Presence of a risk management committee.			
	Appointment of a chief risk manager or equivalent position.			
	The bank has disclosed the number of meetings held by the risk management committee in a financial year.			
	The bank has revealed the size of its risk management committee.			
	Banks have a non-executive director as chairman of the risk management committee.			
Remuneration committee (5)	A Remuneration committee exists.			
	Independent director as a chairman of the committee.			
	Minimum three non-executive directors.			
	At least fifty per cent of the directors shall be independent directors.			
	Information on payments of remuneration/ sitting fees to directors, if any are paid is disclosed in the report.			

Governance dimension	Variables	Score 1 (Full compliance)	Score 0.05 (Partial Compliance)	Score 0 (No Compliance)
Shareholder's right and information (10)	The board constitute the stakeholder's grievance committee.			
	The non-executive director serves as the chairperson of the stakeholder grievance committee.			
	The committee is responsible for investigating investor complaints, and the board must disclose the number of complaints received and resolved during each financial year.			
	The board disclosed information about the last three annual general meetings in the annual report.			
	The board disclosed information about its listing on different stock exchanges in the report.			
	In the report, the bank discloses any dividends paid during the year.			
	The bank has revealed the market price of its shares in the report.			
	The report comprehensively explains the process of the share transfer system.			
	The bank's annual report provides details on the percentage of shares held in dematerialized form.			
	Disclosure of information on the shareholding pattern of shares held by directors.			

Governance dimension	Variables	Score 1 (Full compliance)	Score 0.05 (Partial Compliance)	Score 0 (No Compliance)
Disclosure and transparency (8)	Related party transactions (RPT) are disclosed by the bank.			
	The annual report includes Schedule-17, which outlines the important accounting policies that have been adopted.			
	Including a distinct section on Management Discussion and Analysis in the annual report.			
	The CEO and CFO certified to the board that the bank has complied with all accounting standards and codes of conduct.			
	The annual report discloses any non-compliance by the company, penalties, and strictures imposed by the Stock Exchange, SEBI, or any statutory authority related to capital markets that occurred in the last three years.			
	Banks disclose information regarding the ways and means by which shareholders are informed.			
	For shareholders' information, a summary of the newly appointed or reappointed director's resume is provided.			
	The bank has implemented a whistle-blower policy to provide a mechanism for directors and employees to report any wrongdoing.			

Source: Author’s compilation.