

ANALYSIS OF ADVANCES AND DEPOSITS OF COMMERCIAL BANKS

Submitted in partial fulfilment of the requirements for the award of

MASTER OF BUSINESS ADMINISTRATION

by

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Register No.40410044



SCHOOL OF MANAGEMENT STUDIES

SATHYABAMA

INSTITUTE OF SCIENCE AND TECHNOLOGY

(DEEMED TO BE UNIVERSITY)

Accredited with Grade "A" by NAAC | 12B Status by UGC | Approved by AICTE

JEPPIAAR NAGAR, RAJIV GANDHI SALAI, CHENNAI - 600 119

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SCHOOL OF MANAGEMENT STUDIES

BONAFIDE CERTIFICATE

This is to certify that this Project Report is the bonafide work of **DHAARANI.N (40410044)** who carried out the project entitled "**Analysis of Advances and Deposits of Commercial Banks**" under my supervision from January 2022 to March 2022.

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DECLARATION

I, **DHAARANI.N (40410044)** hereby declare that the Project Report entitled **“Analysis of Advances and Deposits of Commercial Banks”** done by me under the guidance of **DR.SASIREKHA.K** is submitted in partial fulfilment of the requirements for the award of Master of Business Administration degree.

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ABSTRACT

Advances and Deposit management is an important part of the banking management process, which helps in managing the financial risk of the bank. By comparing the advances and deposits over the years, we can come up with a proper strategy during the recession time. Therefore, in this research, the advances and deposits of two commercial banks, Bank of India and State Bank of India are compared during the period from 2008 - 2009 to 2019 - 2020. Here, we can cover Global recession from 2008 – 2010 and include the beginning of COVID – 19 recession. In this study, using this comparison study we can come up with a strategy for COVID – 19 recession.

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CHAPTER 1

INTRODUCTION

1.1 INTRODUCTION

Deposits and Advances management is an important tool through which we can determine the bank's liquidity, and this is also used to find the financial performance of the bank. Through this, we can also manage the financial risks of the bank. There are four main types of financial risks that can affect the performance of the banks.

One of the biggest risks of bank is credit risk. This occurs when the borrowers fail to pay back the obligations. It is tough to protect the bank from this risk. To lower the credit risk, the bank usually checks the borrower's credit history, and their collateral that can be used as the backup for the loans.

The next risk is operational risk. This risk occurs because of loss due to error caused by people, process, and system. These are usually internal mistakes that are made during transactions. But, sometimes, these occur in a large scale because of breaching by hackers. This risk has a large impact on the reputation of the bank.

The next risk is market risk. This risk occurs because of unpredictability of equity markets, commodity prices, interest rates, and credit spreads. The banks involved in sales and trading are more exposed to this type of risk. One way to reduce this type of risk is diversification of investments.

The last risk is liquidity risk. This risk occurs because of inability of bank to pay back cash and do day to day operations. The main reason for this type of risk is that bank depend more on short term funds. To reduce this type of risk, banks should have enough liquid assets.

These above risk can be controlled by practising the advances and deposit management.

1.2 INDUSTRY PROFILE

Bank is a financial institution that provides banking services and plays an important role in the economy. The movement of money handled by the banks makes the economy to grow and prosper. Everyone needs money and banks act as an intermediary between the suppliers and users. In line with the Reserve Bank of India (RBI), the Indian banking sector is sufficiently capitalized and well regulated. The country's financial and economic situation far exceeds that of any other country in the world. Studies of credit, market and liquidity risk suggest that Indian banks are generally resilient and have fared well in the global recession.

1.2.1 TYPES OF BANK

Based on the business needs, the banks are classified as follows,

- Commercial banks
- Retail banks
- Investment banks
- Cooperative banks
- Central banks
- Specialized banks

In this research paper, we consider the commercial banks of India, i.e., State Bank of India and Bank of India.

The top 10 commercial banks of India are,

1. State Bank of India
2. HDFC Bank
3. ICICI Bank
4. Axis Bank
5. Punjab National Bank
6. Kotak Mahindra Bank
7. Canara Bank
8. IndusInd Bank
9. Bank of Baroda
10. Industrial Development Bank of India

1.2.2 CUSTOMERS OF BANK

Bank is a complex organization with number of customers. The major customers of bank are as follows,

- Individual consumers
- Small businesses and traders
- Farmers and Rural consumers
- Corporates
- Banks - Domestic and International
- Governments
- Institutional Investors
- Non - profit organizations.

1.3 MARKET SIZE

The Indian banking system consists of 12 public sector banks, 22 private sector banks, 46 foreign banks, 56 regional rural banks, 1485 urban cooperative banks and 96,000 rural cooperative banks in addition to cooperative credit institutions As of September 2021, the total number of ATMs in India reached 213,145.

In FY 2018-2021, banking assets across all sectors increased. Total assets in the banking sector as a whole (including public and private banks) amounted to US\$2.48 trillion in fiscal year 21.

In fiscal year 2021, the total assets of the public and private banking sectors totalled \$1,602.65 billion and \$878.56 billion, respectively.

During FY16-FY21, bank credit increased at a CAGR of 0.29%. As of FY21, total credit extended surged to US\$ 1,487.60 billion. During FY16-FY21, deposits grew at a CAGR of 12.38% and reached US\$ 2.06 trillion by FY21.

According to the RBI, bank credit stood at Rs. 110.46 trillion (US\$ 1.47 trillion) and credit to non-food industries stood at Rs. 109.82 trillion (US\$ 1.46 trillion) as of September 24, 2021.

1.4 PRODUCTS AND SERVICES OF BANK

Bank is a business operation with the following as the major products and services,

- Acceptance of Deposits
- Lending of Funds
- Clearing of Cheques
- Remittance of Funds
- Lockers & Safe Deposits
- Bill Payment Services
- Online Banking
- Credit & Debit Cards
- Overseas Banking Services
- Wealth Management
- Investment Banking
- Social Objectives

1.5 DEVELOPMENTS IN BANKING SECTOR

As of November 03, 2021, the number of bank accounts—opened under the government’s flagship financial inclusion drive ‘Pradhan Mantri Jan Dhan Yojana (PMJDY)’—reached 43.81 crore and deposits in the Jan Dhan bank accounts totalled >Rs. 1.48 trillion (US\$ 19.89 billion). On November 09, 2021, RBI announced the launch of its first global hackathon 'HARBINGER 2021 – Innovation for Transformation' with the theme ‘Smarter Digital Payments’. In November 2021, Kotak Mahindra Bank announced that it has completed the acquisition of a 9.98% stake in KFin Technologies for Rs. 310 crore (US\$ 41.62 million). In July 2021, Google Pay for Business has enabled small merchants to access credit through tie-up with the digital lending platform for MSMEs—FlexiLoans. In December 2020, in response to the RBI’s cautionary message, the Digital Lenders’ Association issued a revised code of conduct for digital lending. On November 6, 2020, WhatsApp started UPI payments service in India on receiving the National Payments Corporation of India (NPCI) approval to ‘Go Live’ on UPI in a graded manner. In October 2020, HDFC Bank and Apollo Hospitals partnered to launch the ‘HealthyLife Programme’, a holistic healthcare solution that makes healthy living accessible and affordable on Apollo’s digital platform. In 2019, banking and financial services witnessed 32 M&A (merger and acquisition) activities worth US\$ 1.72 billion. In March 2020, State Bank of India (SBI), India’s largest lender, raised US\$

100 million in green bonds through private placement. In February 2020, the Cabinet Committee on Economic Affairs gave its approval for continuation of the process of recapitalization of Regional Rural Banks (RRBs) by providing minimum regulatory capital to RRBs for another year beyond 2019-20 - till 2020-21 to those RRBs which are unable to maintain minimum Capital to Risk weighted Assets Ratio (CRAR) of 9% as per the regulatory norms prescribed by RBI.

1.6 INDUSTRY TRENDS

With the emergence of various models of co-operation and integration between financial industries, some of the traditional distinctions between banks, insurance companies and securities companies are rapidly decreasing. In spite of all these developments, banks continue to maintain and fulfill their main role of accepting deposits and loan funds from these deposits. During recent times, technological advances have enabled banks to extend their reach globally, and there is no longer a need for customers to visit bank branches for every transaction, as most of the transactions can happen online.

The growth of cross-border business has also increased demand for banks that can provide various cross-border services to different nationalities. Despite these improvements in cross-border activities, the banking sector is far from being as globalized as some other sectors. There is no doubt that "Technology" will be a catalyst for this growth, creating huge opportunities for professionals who have a good understanding of the field of banking.

CHAPTER 2

REVIEW OF LITERATURE

2.1 INTRODUCTION

In this Chapter, the researcher has tried to study and understand the concepts of advances and deposits. This attempt includes, understanding the basic concepts of ratio, analysing research studies made by earlier researchers in respect of commercial banks, for this, the researcher has used various books, research Journals and websites. The detailed list is further elaborated in the Bibliography. Through this Literature Survey researcher wants to find out which are the important parameters of advances and deposits management.

K.V.S.Gayathri, M.Chandraiah (2020) in their paper “**A Study On Financial Performance of Indian Commercial Banks**” has mentioned about the comparison of financial performance of commercial banks in India. This study says that the performance of any economy can analysed by the performance of banks in that place. In this study, the secondary data is considered and pointed out that State Bank of India performed better when compared with other commercial banks of India. The study used annual report of the banks from 2009 – 2010 to 2018 – 2019. The profitability of the banks is found by considering the net profit. 20 banks of India were considered in this study.

Grant Thronton (2020) in their paper “**COVID – 19: Impact on the Indian Shadow Banking Sector**” talks about how the investment to be categorised by banks as Held to Maturity even in excess of 25% of total investment permitted to be included in the HTM portfolio thereby, providing protection against mark to market losses. This study mentioned how not only was the physical health was affected but also financial health of the country. The economic growth declined even more when compared with the global recession. The volatile market conditions led to a flight to quality, with yields on safe-haven bonds declining abruptly. This study pointed out how India was amongst the top 10 with highest percentage of bad loans. The only

solution to the problem was the involvement of central bank of India. In this study, number of measures by the RBI are referenced.

Prahallad Chandra Das FCMA (2020) in their paper “**Impact of Advance- Deposit Ratio (ADR) on Financial Performance: Panel Evidence from Commercial Banks in Bangladesh**” has strongly emphasized that the optimum advance deposit ratio has its impact on return on assets, which in turn has effect on the financial health of the bank. This study analyses the commercial banks of Bangladesh from 2000 to 2016. In this study, 10 commercial banks are considered. The study concluded that optimum advance deposit ratio enhances return on assets, while excess advance deposit ratio has negative influence on the financial health of the bank.

K. Surya Suganya (2017) in their Paper “**Global Recession and Its Impact on Indian Financial Markets**” talks about the impact of global recession on the Indian economy. This study points out that the manufacturing industry is the key for providing jobs to the large number. This study also shows the decrease of Indian stock market from 20000 points to 8000 points. Because of Global Recession. India lost in multi-crore business, exports, many lost jobs especially in IT and automobile industries. This also led to the decline of Gross Domestic Product for consecutive 2 years. This study mentioned about how the recession that started at US became a global issue and impacted everyone around the world.

Adilya Yamaltdinova and Burulcha Sulaimanova (2015) in their paper “**Financial Performance of Commercial Banks: The Case of Kyrgyz Republic**” has mentioned about the financial performance comparison of commercial banks in Kyrgyz Republic. This study concluded that the return of assets is influenced by assets amount and operational efficiency of the commercial banks. This study mainly used regression analysis to find the impact. In this study, the secondary data from 2008 – 2014 was used to investigate the financial performance of the commercial banks. The commercial bank was compared with the national bank of

Kyrgyz Republic. It also studied the high rates of inflation and imbalances associated with the restructuring of the economy. Other methods used in the study are graphical application, mathematical applications and others.

Dr. Dharmendra S. Mistry and Vijay Savani (2015) in their paper “**A Comparative Study of The Profitability Performance in the Banking Sector: Evidence from Indian Private Sector Bank**” has mentioned that the operational efficiency, asset management and bank size has an impact on financial performance on Indian Private Sector Banks. This study classifies the Indian Private Sector Banks based on its financial characteristics and assess their financial performance. This study also analyses the deposits, credits, assets, and profitability of some of the Indian banks. In this study, the financial data from 2010 – 2011 to 2012 – 2013 are considered from 21 Indian Banks. The 21 banks are then classified based on its performance as good performer, Average performer and Low performer.

M. Anbalagan and Dr. M. Selvakumar (2014) in their paper “**Analysis of Deposits and Advances of Selected Private Sector Commercial Banks**” has mentioned about the advances and deposit management of the private sector commercial banks. This study considers secondary data of the banks only from the state Tamil Nadu. One of the main test in this study is Kruskal Wallis. In this study, the performance of the banks is analysed by taking into account the credit – deposit ratio of the banks. Here, the data from 2001 – 2002 to 2011 – 2012 are considered.

Deepak Kumar (2013) in their paper “**Performance of banking through credit-deposit ratio in Bihar: A study of last decade**” mentioned about the credit – deposit ratio, which is the key to measure the growth of the bank. If the credit – deposit of the bank is high, it indicates that the bank has used large portion of deposit to earn their profit. The sample used in this study are secondary data collected from the period of 2001 – 2011. This study considers only the bank of Bihar. According to this study, the bank with highest CD ratio is Syndicate Bank. But it also says that additional research should be done in order to mobilize funds

smoothly. The study shows that Bihar is also the state with the lowest rating CD ratio. Therefore, it is advisable to consider the whole of country instead of considering a single state.

Dr. Anurag. B. Singh and Ms. Priyanka Tandon (2012) in their Paper “**A Study of Financial Performance: A Comparative Analysis of SBI And ICICI Bank**” has compared the financial performance of the two banks, State bank of India and ICICI bank on the basis of the ratios. This study focuses on how sound the bank is and its deposits and expenditures. This study considers one private sector bank and one public sector bank. This study uses secondary data collected from annual reports of the banks, magazines, journals, documents and other published information.

Duvvuri Subbarao (2009) in their paper “**Impact of the Global Financial Crisis on India**

Collateral Damage and Response” has mentioned about the challenges experienced by India during the Global recession. The countries which faced the problem initially were United States, Europe and Japan. This study also addressed several questions like how India faced the crisis, what are the measures taken by the RBI, and many more. With the help of this study, we can clearly understand about the economic condition of India during Global recession.

CHAPTER 3

RESEARCH METHODOLOGY

3.1 NEED FOR STUDY

- This study on Deposit and Advances will help to measure, analyze and monitor the risks involved in banking.
- This study on Deposit and Advances will help to prepare strategies for the better management of the banks.
- This study on Deposit and Advances will help the bank to understand the need to maintain the balance between the deposits and advances.

3.2 SCOPE OF STUDY

- This study pertains only to the two commercial banks, State Bank of India and Bank of India.
- This study doesn't apply to all the commercial banks in India.
- This study is conducted with the help of annual reports of the above mentioned two banks.
- This study analyses the annual report from 2009 to 2020.

3.3 OBJECTIVES OF STUDY

- To evaluate and compare the credit- deposit ratio of both SBI and BOI banks.
- To determine the lending pattern of the two banks during the period from 2008 - 2009 to 2019 - 2020
- To study the pattern and come up with a strategy accordingly.

3.4 RESEARCH DESIGN

Correlational research attempts to determine the extent of a relationship between two or more variables using statistical data. In this type of design, relationships between and among a number of facts are sought and interpreted. This type of research will recognize trends and patterns in data, but it does not go so far in its analysis to prove causes for these observed patterns.

3.4.1 ANALYTICAL RESEARCH

This research must use facts or information already available and analyze to make a critical evaluation of materials.

3.5 PERIOD OF STUDY

The duration of the study is from 2008-2009 to 2019-2020, which is twelve years of study.

CHAPTER 4

DATA ANALYSIS AND INTERPRETATION

4.1 PERCENTAGE ANALYSIS

4.1.1 CREDIT DEPOSIT RATIO

Credit deposit ratio of a bank is the total amount of credit extended to the customers or borrowers of the bank out of the total deposits of the bank. This ratio is usually represented in the form of percentage. This ratio is also called as loan deposit ratio or advance to deposit ratio. It is an important tool to determine the liquidity of the bank, which also influences the profitability of the bank. According to Investopedia, an ideal credit deposit ratio is between 80% to 90%. While, RBI has suggested that it is better for the banks to achieve a minimum of 60% of credit deposit ratio. The equation of credit deposit ratio is,

$$\text{Credit deposit ratio} = \left(\frac{\text{Total Advances}}{\text{Total Deposits}} \right) * 100$$

Credit deposit ratio of State Bank of India from the year 2008-2009 to the year 2019-2020 is given in the table 4.1

Table 4.1 Credit deposit ratio of SBI

Year	Advances (Rs in millions)	Deposits (Rs in millions)	Credit Deposit Ratio %
2008 - 2009	54,25,032.04	74,20,731.28	73.11
2009 - 2010	63,19,141.52	80,41,162.27	78.58
2010 - 2011	75,67,194.48	93,39,328.13	81.03
2011 - 2012	86,75,788.90	1,04,36,473.62	83.13
2012 - 2013	1,04,56,165.53	1,20,27,395.74	86.94
2013 - 2014	1,20,98,287.19	1,39,44,085.05	86.76
2014 - 2015	1,30,00,263.93	1,57,67,932.45	82.45
2015 - 2016	1,46,37,004.18	1,73,07,224.36	84.57
2016 - 2017	1,57,10,783.81	2,04,47,513.95	76.83
2017 - 2018	1,93,48,801.89	2,70,63,432.85	71.49
2018 - 2019	2,18,58,769.18	2,91,13,860.11	75.08

2019 - 2020	2,32,52,895.61	3,24,16,207.34	71.73
Mean	1,31,95,844.02	1,69,43,778.93	79.31
Standard Deviation	5961903.181	8565214.428	5.64316186
COV %	45.18	50.55	7.12
Growth %	328.62	336.83	-1.88
Average Annual Growth %	27.39	28.07	-0.16

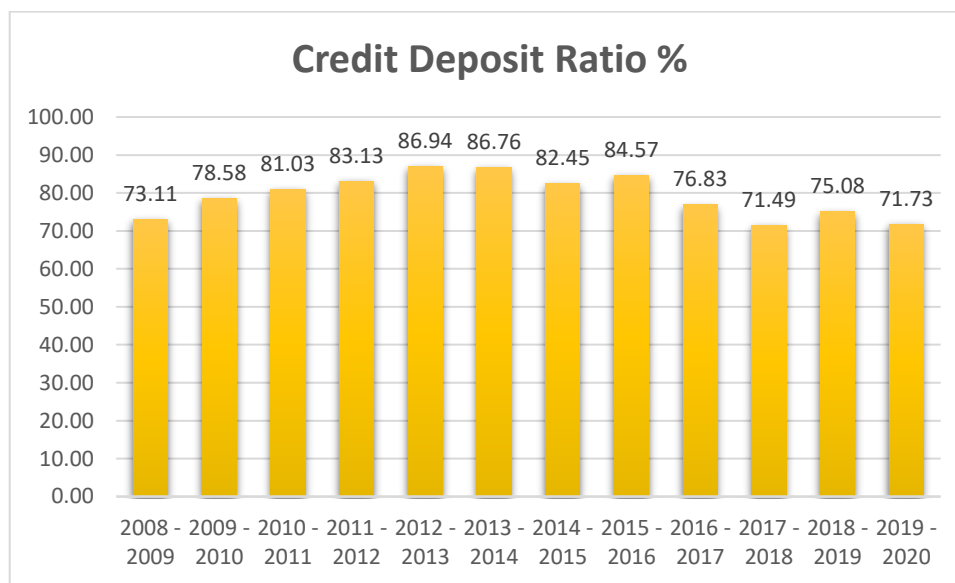


Chart 4.1 Credit Deposit ratio of SBI

INTERPRETATION

From the table 4.1, it can be interpreted that the credit deposit ratio for the year 2008-2009 was 73.11% with advances 54,25,032.04 million and deposit 74,20,731.28 million. For the 2009-2010, the credit deposit ratio was 78.58% with advances 63,19,141.52 million and deposits 80,41,162.27 million. The credit deposit ratio for the period 2010-2011 was 81.03% and the advances and deposit for the year were 75,67,194.48 million and 93,39,328.13 million. For the following year, the ratio was 83.13%, while its advances were 86,75,788.90 million and deposits were 1,04,36,473.62 million. During the year 2012-2013, the advances were 1,04,56,165.53 million, the deposits were 1,20,27,395.74 million and the credit deposit ratio was 86.94%. In the consecutive year, the credit deposit ratio was 86.76%, the advances were 1,20,98,287.19 million and the deposits were 1,39,44,085.05 million. The year 2014-2015, the credit deposit ratio was 82.45%,

the advances were 1,30,00,263.93 million and the deposits were 1,57,67,932.45 million. In the year 2015-2016, it was recorded 1,46,37,004.18 million as advances, 1,73,07,224.36 million as deposits and 84.57% as credit deposit ratio. During the next year, the credit deposit ratio was 76.83% with advances 1,57,10,783.81 million and deposits 2,04,47,513.95 million. The credit deposit ratio for the year 2017-2018 was 71.49%, while the advances and deposits were 1,93,48,801.89 million and 2,70,63,432.85 million. The advances and deposits for the consecutive year were 2,18,58,769.18 million and 2,91,13,860.11 million with credit deposit ratio as 75.08%. At last, for the last year in this paper 2019-2020, the advances, deposits and the credit deposit ratio were 2,32,52,895.61 million, 3,24,16,207.34 million and 71.73%. State Bank of India has recorded that average advances and deposits were 1,31,95,844.02 million and 1,69,43,778.93 million. The average credit deposit ratio for the study period 2008-2020 was 79.31%. The coefficient of variation of advances was 45.18%, deposits was 50.55% and that of credit deposit ratio was 7.12%. It is evident that growth percentage of advances was 328.62% and that of deposits was 336.83%. Credit deposit ratio's growth percentage is -1.88%. State Bank of India's average annual growth percentage of advances and deposits were 27.39% and 28.07%, while the average annual growth percentage of credit deposit ratio is -0.16%.

INFERENCE

The credit deposit ratio was highest (86.94%) during the year 2012-2013 and lowest (71.49%) during the year 2017-2018. The average credit deposit ratio of State Bank of India is 79.31%. The average value is more or less equal to the ideal value, this shows that the bank was making full use of the resource and has enough liquidity to cover the unforeseen fund requirements.

Credit deposit ratio of Bank of India from the year 2008-2009 to the year 2019-2020 is given in the table 4.2.

Table 4.2 Credit Deposit ratio of BOI

Year	Advances (Rs in millions)	Deposits (Rs in millions)	Credit Deposit Ratio %
2008 - 2009	14,29,093.74	18,97,084.80	75.33
2009 - 2010	16,84,907.10	22,97,619.44	73.33
2010 - 2011	21,30,961.82	29,88,858.06	71.30
2011 - 2012	24,88,333.44	31,82,160.33	78.20
2012 - 2013	28,93,674.97	38,18,395.86	75.78
2013 - 2014	37,07,335.36	47,69,740.52	77.73
2014 - 2015	40,20,255.47	53,19,066.35	75.58
2015 - 2016	36,13,018.91	51,57,224.80	70.06
2016 - 2017	36,83,287.65	54,23,521.15	67.91
2017 - 2018	34,32,889.21	52,29,969.04	65.64
2018 - 2019	34,29,663.40	52,25,549.62	65.63
2019 - 2020	37,06,440.85	55,73,864.27	66.50
Mean	30,18,321.83	42,40,254.52	71.92
Standard Deviation	877833.267	1332864.228	4.703688207
COV %	29.08	31.43	6.54
Growth %	159.36	193.81	-11.73
Average Annual Growth %	13.28	16.15	-0.98

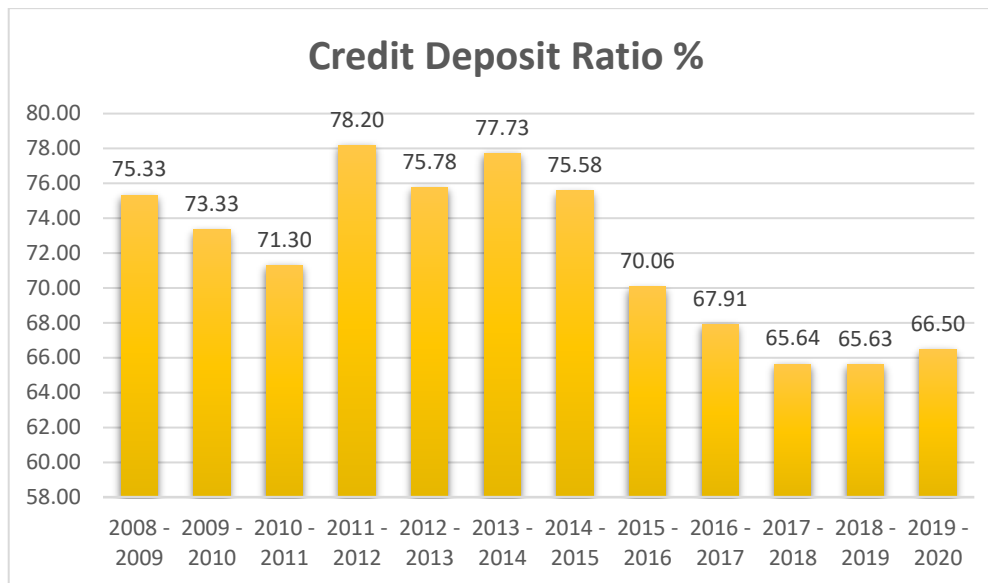


Chart 4.2 Credit Deposit ratio of BOI

INTERPRETATION

From the table 4.2, it can be interpreted that the credit deposit ratio for the year 2008-2009 was 75.33% with advances 14,29,093.74 million and deposit 18,97,084.80 million. For the 2009-2010, the credit deposit ratio was 73.33% with advances 16,84,907.10 million and deposits 22,97,619.44 million. The credit deposit ratio for the period 2010-2011 was 71.30% and the advances and deposit for the year were 21,30,961.82 million and 29,88,858.06 million. For the following year, the ratio was 78.20%, while its advances were 24,88,333.44 million and deposits were 31,82,160.33 million. During the year 2012-2013, the advances were 28,93,674.97 million, the deposits were 38,18,395.86 million and the credit deposit ratio was 75.78%. In the consecutive year, the credit deposit ratio was 77.73%, the advances were 37,07,335.36 million and the deposits were 47,69,740.52 million. The year 2014-2015, the credit deposit ratio was 75.58%, the advances were 40,20,255.47 million and the deposits were 53,19,066.35 million. In the year 2015-2016, it was recorded 36,13,018.91 million as advances, 51,57,224.80 million as deposits and 70.06% as credit deposit ratio. During the next year, the credit deposit ratio was 67.91% with advances 36,83,287.65 million and deposits 54,23,521.15 million. The credit deposit ratio for the year 2017-2018 was 65.64%, while the advances and deposits were 34,32,889.21 million and 52,29,969.04 million. The advances and deposits for the consecutive year were 34,29,663.40 million and 52,25,549.62 million with credit deposit ratio as 65.63%. At last, for the last year in this paper

2019-2020, the advances, deposits and the credit deposit ratio were 37,06,440.85 million, 55,73,864.27 million and 66.50%. Bank of India has recorded that average advances and deposits were 30,18,321.83 million and 42,40,254.52 million. The average credit deposit ratio for the study period 2008-2020 was 71.92%. The coefficient of variation of advances was 29.08%, deposits was 31.43% and that of credit deposit ratio was 6.54%. It is evident that growth percentage of advances was 159.36% and that of deposits was 193.81%. Credit deposit ratio's growth percentage is -11.73%. Bank of India's average annual growth percentage of advances and deposits were 13.28% and 16.15%, while the average annual growth percentage of credit deposit ratio is -0.98%.

INFERENCE

The credit deposit ratio was highest (78.20%) during the year 2011-2012 and lowest (65.63%) during the year 2018-2019. The average credit deposit ratio of Bank of India is 71.92%. The average value is much lower than the ideal value, this shows that the bank was not making full use of the resource.

4.1.2 CASH DEPOSIT RATIO

Cash deposit ratio shows the lending ability of the bank from its deposits. By calculating the cash deposit ratio, the bank can provide assurance to their customers that they have adequate funds that they can withdraw from its deposits whenever they can. This ratio is usually represented in the form of percentage. According to RBI, cash deposit ratio should be 60%. This shows that for every 100 rupees deposits, the bank should give 60 rupees as loan or credit. The equation for cash deposit ratio is

$$\text{Cash Deposit Ratio} = \left(\frac{\text{Cash in hand and balances with RBI}}{\text{Total Deposits}} \right) * 100$$

Cash deposit ratio of State Bank of India from the year 2008-2009 to the year 2019-2020 is given in the table 4.3

Table 4.3 Cash deposit ratio of SBI

Year	Deposits (Rs in millions)	Cash (Rs in millions)	Cash Deposit Ratio %
2008 - 2009	74,20,731.28	10,44,037.99	14.07
2009 - 2010	80,41,162.27	9,61,838.42	11.96
2010 - 2011	93,39,328.13	12,28,741.48	13.16
2011 - 2012	1,04,36,473.62	9,71,631.65	9.31
2012 - 2013	1,20,27,395.74	11,48,201.65	9.55
2013 - 2014	1,39,44,085.05	13,25,496.33	9.51
2014 - 2015	1,57,67,932.45	17,48,613.04	11.09
2015 - 2016	1,73,07,224.36	12,96,671.64	7.49
2016 - 2017	2,04,47,513.95	17,19,716.50	8.41
2017 - 2018	2,70,63,432.85	19,18,986.42	7.09
2018 - 2019	2,91,13,860.11	22,24,901.12	7.64
2019 - 2020	3,24,16,207.34	25,10,970.05	7.75
Mean	1,69,43,778.93	15,08,317.19	9.75
Standard Deviation	8565214.428	511519.5684	2.328956134
COV %	50.55	33.91	23.88
Growth %	336.83	140.51	-44.94

Average Annual Growth %	28.07	11.71	-3.75
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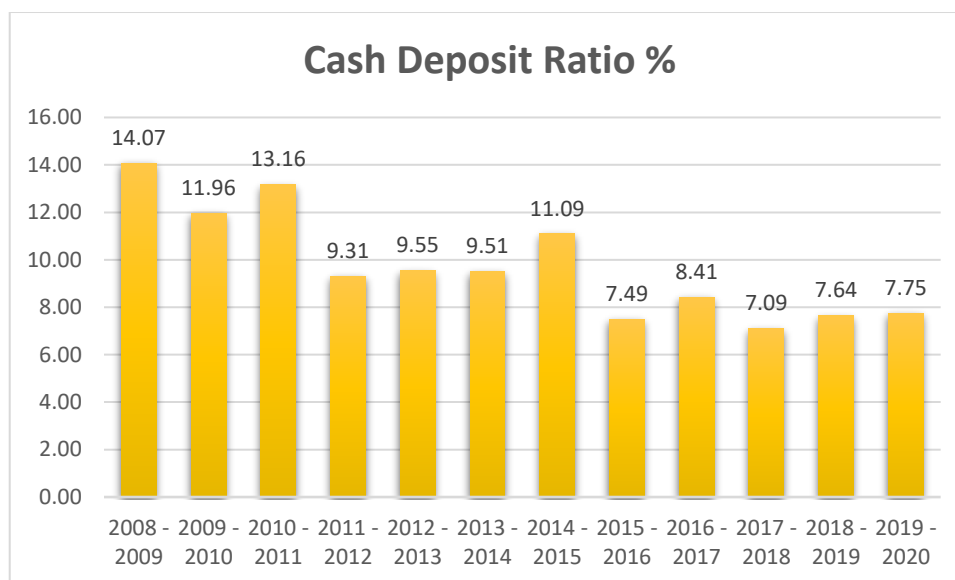


Chart 4.3 Cash Deposit ratio of SBI

INTERPRETATION

From the table 4.3, it can be interpreted that the cash deposit ratio for the year 2008-2009 was 14.07% with cash 10,44,037.99 million and deposit 74,20,731.28 million. For the 2009-2010, the cash deposit ratio was 11.96% with cash 9,61,838.42 million and deposits 80,41,162.27 million. The cash deposit ratio for the period 2010-2011 was 13.16% and the cash and deposit for the year were 12,28,741.48 million and 93,39,328.13 million. For the following year, the ratio was 9.31%, while its cash were 9,71,631.65 million and deposits were 1,04,36,473.62 million. During the year 2012-2013, the cash were 11,48,201.65 million, the deposits were 1,20,27,395.74 million and the cash deposit ratio was 9.55%. In the consecutive year, the cash deposit ratio was 9.51%, the cash were 13,25,496.33 million and the deposits were 1,39,44,085.05 million. The year 2014-2015, the cash deposit ratio was 11.09%, the cash were 17,48,613.04 million and the deposits were 1,57,67,932.45 million. In the year 2015-2016, it was recorded 12,96,671.64 million as cash, 1,73,07,224.36 million as deposits and 7.49% as cash deposit ratio. During the next year, the cash deposit ratio was 8.41% with cash 17,19,716.50 million and deposits 2,04,47,513.95 million. The cash deposit ratio for the year 2017-2018 was 7.09%, while the cash

and deposits were 19,18,986.42 million and 2,70,63,432.85 million. The cash and deposits for the consecutive year were 22,24,901.12 million and 2,91,13,860.11 million with cash deposit ratio as 7.64%. At last, for the last year in this paper 2019-2020, the cash, deposits and the cash deposit ratio were 25,10,970.05 million, 3,24,16,207.34 million and 7.75%. State Bank of India has recorded that average cash and deposits were 15,08,317.19 million and 1,69,43,778.93 million. The average cash deposit ratio for the study period 2008-2020 was 9.75%. The coefficient of variation of cash was 33.91%, deposits was 50.55% and that of cash deposit ratio was 23.88%. It is evident that growth percentage of cash was 140.51% and that of deposits was 336.83%. Cash deposit ratio's growth percentage is -44.94%. State Bank of India's average annual growth percentage of cash and deposits were 11.71% and 28.07%, while the average annual growth percentage of cash deposit ratio is -3.75%.

INFERENCE

The cash deposit ratio was highest (14.07%) during the year 2008-2009 and lowest (7.09%) during the year 2017-2018. The average cash deposit ratio of State Bank of India is 9.75%. The average value is much lower than the ideal value, this shows that the bank does not have enough cash in hand when compared with ideal value.

Cash deposit ratio of Bank of India from the year 2008-2009 to the year 2019-2020 is given in the table 4.4

Table 4.4 Cash Deposit ratio of BOI

Year	Deposits (Rs in millions)	Cash (Rs in millions)	Cash Deposit Ratio %
2008 - 2009	18,97,084.80	2,17,612.56	11.47
2009 - 2010	22,97,619.44	3,12,301.34	13.59
2010 - 2011	29,88,858.06	3,73,099.89	12.48
2011 - 2012	31,82,160.33	3,47,112.55	10.91
2012 - 2013	38,18,395.86	5,48,358.59	14.36
2013 - 2014	47,69,740.52	6,13,822.94	12.87
2014 - 2015	53,19,066.35	7,64,036.96	14.36
2015 - 2016	51,57,224.80	9,95,047.18	19.29
2016 - 2017	54,23,521.15	9,64,647.09	17.79
2017 - 2018	52,29,969.04	9,60,242.33	18.36
2018 - 2019	52,25,549.62	9,48,599.95	18.15
2019 - 2020	55,73,864.27	8,66,090.59	15.54
Mean	42,40,254.52	6,59,247.66	14.93
Standard Deviation	1332864.228	292823.1616	2.868971536
COV %	31.43	44.42	19.21
Growth %	193.81	298.00	35.46
Average Annual Growth %	16.15	24.83	2.95

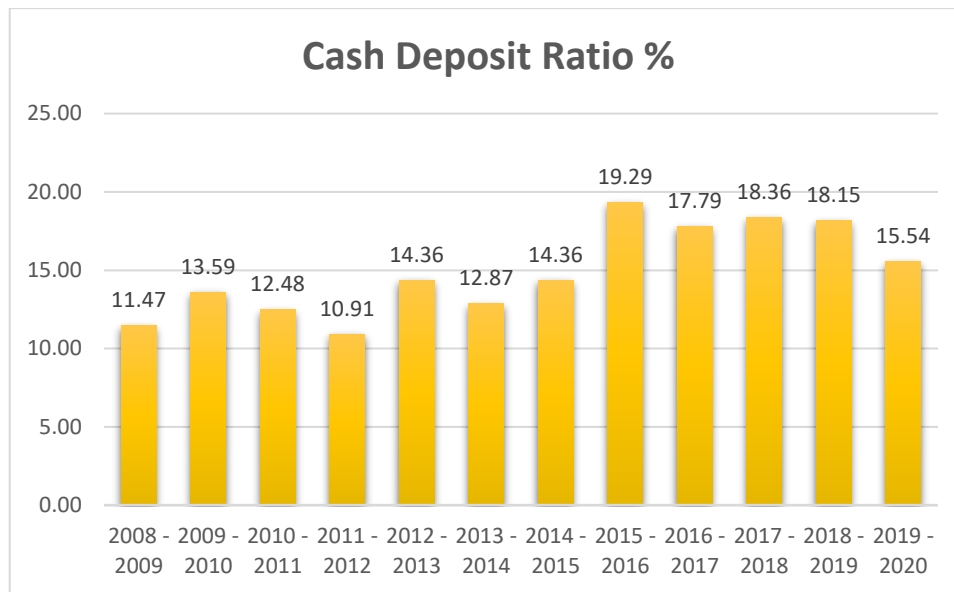


Chart 4.4 Cash Deposit ratio of BOI

INTERPRETATION

From the table 4.4, it can be interpreted that the cash deposit ratio for the year 2008-2009 was 11.47% with cash 2,17,612.56 million and deposit 18,97,084.80 million. For the 2009-2010, the cash deposit ratio was 13.59% with cash 3,12,301.34 million and deposits 22,97,619.44 million. The cash deposit ratio for the period 2010-2011 was 12.48% and the cash and deposit for the year were 3,73,099.89 million and 29,88,858.06 million. For the following year, the ratio was 10.91%, while its cash were 3,47,112.55 million and deposits were 31,82,160.33 million. During the year 2012-2013, the cash were 5,48,358.59 million, the deposits were 38,18,395.86 million and the cash deposit ratio was 14.36%. In the consecutive year, the cash deposit ratio was 12.87%, the cash were 6,13,822.94 million and the deposits were 47,69,740.52 million. The year 2014-2015, the cash deposit ratio was 14.36%, the cash were 7,64,036.96 million and the deposits were 53,19,066.35 million. In the year 2015-2016, it was recorded 9,95,047.18 million as cash, 51,57,224.80 million as deposits and 19.29% as cash deposit ratio. During the next year, the cash deposit ratio was 17.79% with cash 9,64,647.09 million and deposits 54,23,521.15 million. The cash deposit ratio for the year 2017-2018 was 18.36%, while the cash and deposits were 9,60,242.33 million and 52,29,969.04 million. The cash and deposits for the consecutive year were 9,48,599.95 million and 52,25,549.62 million with cash deposit ratio as 18.15%. At last, for the last year in this paper 2019-2020, the cash, deposits and the cash deposit ratio were 8,66,090.59 million, 55,73,864.27 million

and 15.54%. Bank of India has recorded that average cash and deposits were 6,59,247.66 million and 42,40,254.52 million. The average cash deposit ratio for the study period 2008-2020 was 14.93%. The coefficient of variation of cash was 44.42%, deposits was 31.43% and that of cash deposit ratio was 19.21%. It is evident that growth percentage of cash was 298.00% and that of deposits was 193.81%. Cash deposit ratio's growth percentage is 35.46%. Bank of India's average annual growth percentage of cash and deposits were 24.83% and 16.15%, while the average annual growth percentage of cash deposit ratio is 2.95%.

INFERENCE

The cash deposit ratio was highest (19.29%) during the year 2015-2016 and lowest (10.91%) during the year 2011-2012. The average cash deposit ratio of Bank of India is 14.93%. The average value is much lower than the ideal value, this shows that the bank does not have enough cash in hand when compared with ideal value.

4.1.3 INVESTMENT DEPOSIT RATIO

Investment deposit ratio shows how much of money from the deposit did the bank choose to invest. In this investment include both short term investment as well as long term investment. This ratio is usually represented in the form of percentage. The equation of investment deposit ratio is

$$\text{Investment Deposit Ratio} = \left(\frac{\text{Investments}}{\text{Total Deposits}} \right) * 100$$

Investment deposit ratio of State Bank of India from the year 2008-2009 to the year 2019-2020 is given in the table 4.5

Table 4.5 Investment Deposit ratio of SBI

Year	Deposits (Rs in millions)	Investments (Rs in millions)	Investment Deposit Ratio %
2008 - 2009	74,20,731.28	27,59,539.57	37.19
2009 - 2010	80,41,162.27	28,57,900.71	35.54
2010 - 2011	93,39,328.13	29,56,005.69	31.65
2011 - 2012	1,04,36,473.62	31,21,976.10	29.91
2012 - 2013	1,20,27,395.74	35,09,272.72	29.18
2013 - 2014	1,39,44,085.05	39,83,081.90	28.56
2014 - 2015	1,57,67,932.45	49,50,273.95	31.39
2015 - 2016	1,73,07,224.36	47,70,972.77	27.57
2016 - 2017	2,04,47,513.95	76,59,896.31	37.46
2017 - 2018	2,70,63,432.85	1,06,09,867.15	39.20
2018 - 2019	2,91,13,860.11	96,70,219.48	33.22
2019 - 2020	3,24,16,207.34	1,04,69,545.18	32.30
Mean	1,69,43,778.93	56,09,879.29	32.76
Standard Deviation	8565214.428	3110591.21	3.813591271
COV %	50.55	55.45	11.64
Growth %	336.83	279.39	-13.15

Average Annual Growth %	28.07	23.28	-1.10
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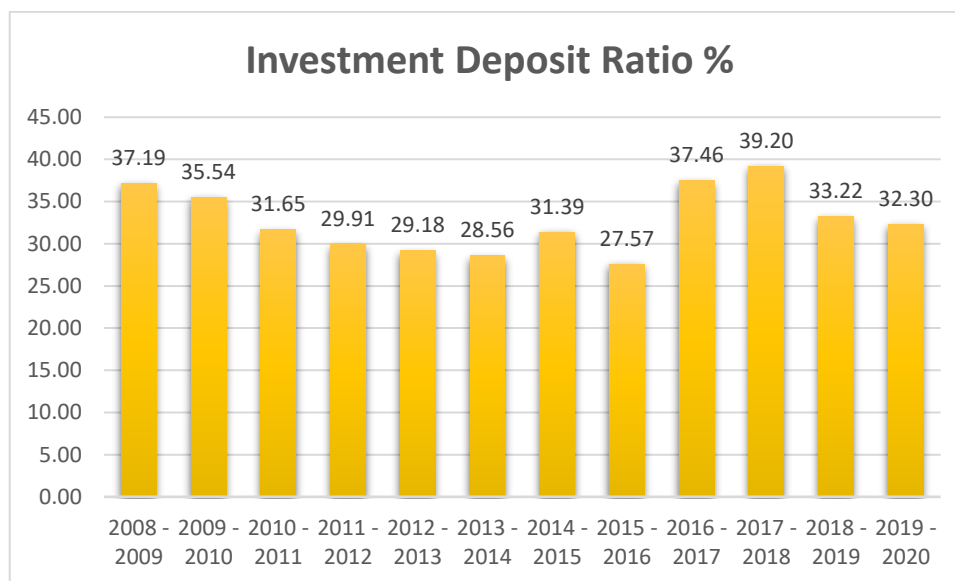


Chart 4.5 Investment deposit ratio of SBI

INTERPRETATION

From the table 4.5, it can be interpreted that the investment deposit ratio for the year 2008-2009 was 37.19% with investments 27,59,539.57 million and deposit 74,20,731.28 million. For the 2009-2010, the investment deposit ratio was 35.54% with investments 28,57,900.71million and deposits 80,41,162.27 million. The investment deposit ratio for the period 2010-2011 was 31.65% and the investments and deposit for the year were 29,56,005.69 million and 93,39,328.13 million. For the following year, the ratio was 29.91%, while its investments were 31,21,976.10 million and deposits were 1,04,36,473.62 million. During the year 2012-2013, the investments were 35,09,272.72 million, the deposits were 1,20,27,395.74 million and the investment deposit ratio was 29.18%. In the consecutive year, the investment deposit ratio was 28.56%, the investments were 39,83,081.90 million and the deposits were 1,39,44,085.05 million. The year 2014-2015, the investment deposit ratio was 31.39%, the investments were 49,50,273.95 million and the deposits were 1,57,67,932.45 million. In the year 2015-2016, it was recorded 47,70,972.77 million as investments, 1,73,07,224.36 million as deposits and 27.57% as investment deposit ratio. During the next year, the investment deposit ratio was 37.46% with investments 76,59,896.31 million and deposits 2,04,47,513.95 million.

The investment deposit ratio for the year 2017-2018 was 39.20%, while the investments and deposits were 1,06,09,867.15 million and 2,70,63,432.85 million. The investments and deposits for the consecutive year were 96,70,219.48 million and 2,91,13,860.11 million with investment deposit ratio as 33.22%. At last, for the last year in this paper 2019-2020, the investments, deposits and the investment deposit ratio were 1,04,69,545.18 million, 3,24,16,207.34 million and 32.30%. State Bank of India has recorded that average investments and deposits were 56,09,879.29 million and 1,69,43,778.93 million. The average investment deposit ratio for the study period 2008-2020 was 32.76%. The coefficient of variation of investments was 55.45%, deposits was 50.55% and that of investment deposit ratio was 11.64%. It is evident that growth percentage of investments was 279.39% and that of deposits was 336.83%. Investment deposit ratio's growth percentage is -13.15%. State Bank of India's average annual growth percentage of investments and deposits were 23.28% and 28.07%, while the average annual growth percentage of investment deposit ratio is -1.10%.

INFERENCE

The investment deposit ratio was highest (39.20%) during the year 2017-2018 and lowest (27.57%) during the year 2015-2016. The average cash deposit ratio of State Bank of India is 32.76%. The average value shows how much the bank invests from the deposited amount.

Investment deposit ratio of Bank of India from the year 2008-2009 to the year 2019-2020 is given in the table 4.6

Table 4.6 Investment deposit ratio of BOI

Year	Deposits (Rs in millions)	Investments (Rs in millions)	Investment Deposit Ratio %
2008 - 2009	18,97,084.80	5,26,071.79	27.73
2009 - 2010	22,97,619.44	6,70,801.80	29.20
2010 - 2011	29,88,858.06	8,58,724.18	28.73
2011 - 2012	31,82,160.33	8,67,535.86	27.26
2012 - 2013	38,18,395.86	9,46,134.32	24.78
2013 - 2014	47,69,740.52	11,41,524.37	23.93
2014 - 2015	53,19,066.35	11,97,920.48	22.52
2015 - 2016	51,57,224.80	12,26,209.09	23.78
2016 - 2017	54,23,521.15	13,07,512.63	24.11
2017 - 2018	52,29,969.04	14,03,210.71	26.83
2018 - 2019	52,25,549.62	15,09,050.17	28.88
2019 - 2020	55,73,864.27	16,23,229.08	29.12
Mean	42,40,254.52	11,06,493.71	26.41
Standard Deviation	1332864.228	337417.6378	2.438258494
COV %	31.43	30.49	9.23
Growth %	193.81	208.56	5.02
Average Annual Growth %	16.15	17.38	0.42

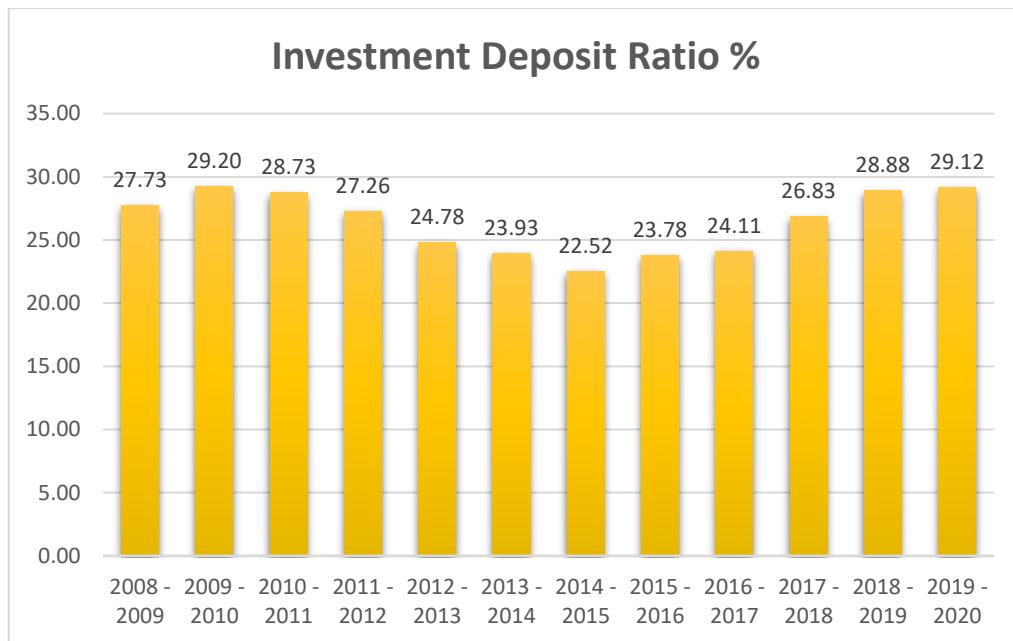


Chart 4.6 Investment deposit ratio of BOI

INTERPRETATION

From the table 4.6, it can be interpreted that the investment deposit ratio for the year 2008-2009 was 27.73% with investments 5,26,071.79 million and deposit 18,97,084.80 million. For the 2009-2010, the investment deposit ratio was 29.20% with investments 6,70,801.80 million and deposits 22,97,619.44 million. The investment deposit ratio for the period 2010-2011 was 28.73% and the investments and deposit for the year were 8,58,724.18 million and 29,88,858.06 million. For the following year, the ratio was 27.26%, while its investments were 8,67,535.86 million and deposits were 31,82,160.33 million. During the year 2012-2013, the investments were 9,46,134.32 million, the deposits were 38,18,395.86 million and the investment deposit ratio was 24.78%. In the consecutive year, the investment deposit ratio was 23.93%, the investments were 11,41,524.37 million and the deposits were 47,69,740.52 million. The year 2014-2015, the investment deposit ratio was 22.52%, the investments were 11,97,920.48 million and the deposits were 53,19,066.35 million. In the year 2015-2016, it was recorded 12,26,209.09 million as investments, 51,57,224.80 million as deposits and 23.78% as investment deposit ratio. During the next year, the investment deposit ratio was 24.11% with investments 13,07,512.63 million and deposits 54,23,521.15 million. The investment deposit ratio for the year 2017-2018 was 26.83%, while the investments and deposits were 14,03,210.71 million and 52,29,969.04 million. The investments and

deposits for the consecutive year were 15,09,050.17 million and 52,25,549.62 million with investment deposit ratio as 28.88%. At last, for the last year in this paper 2019-2020, the investments, deposits and the investment deposit ratio were 16,23,229.08 million, 55,73,864.27 million and 29.12%. Bank of India has recorded that average investments and deposits were 11,06,493.71 million and 42,40,254.52 million. The average investment deposit ratio for the study period 2008-2020 was 26.41%. The coefficient of variation of investments was 30.49%, deposits was 31.43% and that of investment deposit ratio was 9.23%. It is evident that growth percentage of investments was 208.56% and that of deposits was 193.81%. Investment deposit ratio's growth percentage is 5.02%. Bank of India's average annual growth percentage of investments and deposits were 17.38% and 16.15%, while the average annual growth percentage of investment deposit ratio is 0.42%.

INFERENCE

The investment deposit ratio was highest (29.20%) during the year 2009-2010 and lowest (22.52%) during the year 2014-2015. The average cash deposit ratio of Bank of India is 26.41%. The average value shows how much the bank invests from the deposited amount.

4.1.4 RETURN ON ASSETS RATIO

Return on assets ratio shows the profitability of the bank in relation to the total net assets. This ratio also shows how efficient the bank is using its assets to generate profit. This ratio is usually expressed in the form of percentage. Usually, the value more than 5% is considered as good, while the value more than 20% is considered as great. The equation for return on assets is

$$\text{Return on Assets ratio} = \left(\frac{\text{Net Income}}{\text{Total Assets}} \right) * 100$$

Return on assets ratio of State Bank of India from the year 2008-2009 to the year 2019-2020 is given in the table 4.7

Table 4.7 Return on assets ratio of SBI

Year	Net Income (Rs in Millions)	Total Assets (Rs in millions)	Return on Assets %
2008 - 2009	91215.658	9644320.807	0.95
2009 - 2010	91663.923	10534137.31	0.87
2010 - 2011	82648.583	12237362.01	0.68
2011 - 2012	117133.394	13355192.31	0.88
2012 - 2013	141053.242	15662610.4	0.90
2013 - 2014	108915.11	17922345.99	0.61
2014 - 2015	131018.968	20480798	0.64
2015 - 2016	99509.785	22590630.33	0.44
2016 - 2017	104844.194	27059663.04	0.39
2017 - 2018	-129548.266	34547519.97	-0.37
2018 - 2019	-142163.388	36809142.49	-0.39
2019 - 2020	-7379.448	39513939.18	-0.02
Mean	57409.31292	21696471.82	0.46
Standard Deviation	97510.03199	10538245.78	0.48
COV %	169.85	48.57	103.23
Growth %	-108.09	309.71	-101.97
Average Annual Growth %	-9.01	25.81	-8.50

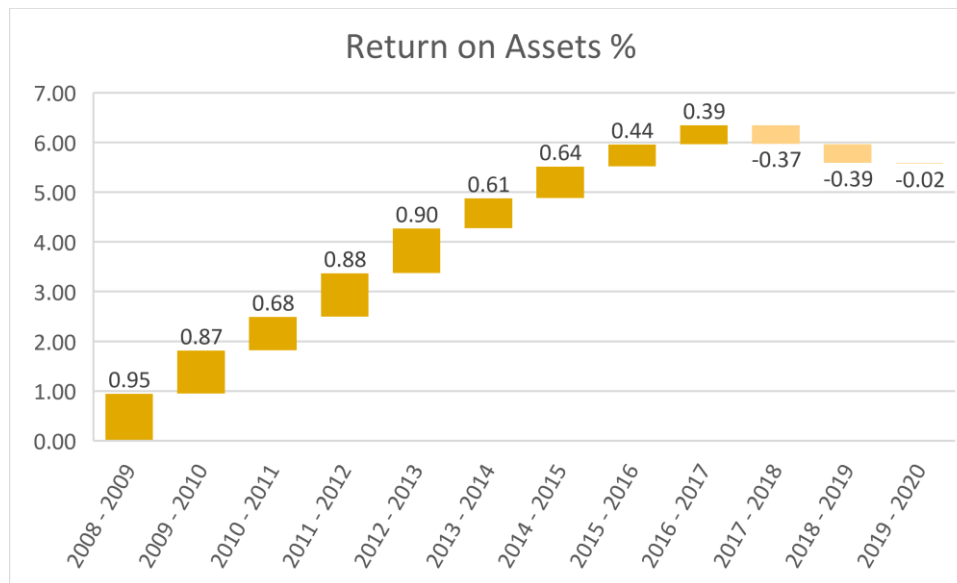


Chart 4.7 Return on assets ratio of SBI

INTERPRETATION

From the table 4.7, it can be interpreted that the return on assets ratio for the year 2008-2009 was 0.95% with net income 91215.658 million and total assets 9644320.807 million. For the 2009-2010, the return on assets ratio was 0.87% with net income 91663.923 million and total assets 10534137.31 million. The return on assets ratio for the period 2010-2011 was 0.68% and the net income and total assets for the year were 82648.583 million and 12237362.01 million. For the following year, the ratio was 0.88%, while its net income was 117133.394 million and total assets were 13355192.31 million. During the year 2012-2013, the net income was 141053.242 million, the total assets were 15662610.4 million and the return on assets ratio was 0.90%. In the consecutive year, the return on assets ratio was 0.61%, the net income was 108915.11 million and the total assets were 17922345.99 million. The year 2014-2015, the return on assets ratio was 0.64%, the net income was 131018.968 million and the total assets were 20480798 million. In the year 2015-2016, it was recorded 99509.785 million as net income, 22590630.33 million as total assets and 0.44% as return on assets ratio. During the next year, the return on assets ratio was 0.39% with net income 104844.194 million and total assets 27059663.04 million. The return on assets ratio for the year 2017-2018 was -0.37%, while the net income and total assets were -129548.266 million and 34547519.97 million. The net income and total assets for the consecutive year were -142163.388 million and 36809142.49 million with return on assets ratio as -

0.39%. At last, for the last year in this paper 2019-2020, the net income, total assets and the return on assets ratio were -7379.448 million, 39513939.18 million and -0.02%. State Bank of India has recorded that average net income and total assets were 57409.31292 million and 21696471.82 million. The average return on assets ratio for the study period 2008-2020 was 0.46%. The coefficient of variation of net income was 169.85%, total assets was 48.57% and that of return on assets ratio was 103.23%. It is evident that growth percentage of net income was -108.09% and that of total assets was 307.71%. Return on assets ratio's growth percentage is -101.97%. State Bank of India's average annual growth percentage of net income and total assets were -9.01% and 25.81%, while the average annual growth percentage of return on assets ratio is -8.50%.

INFERENCE

The Return on assets ratio was highest (0.95%) during the year 2008-2009 and lowest (-0.02%) during the year 2019-2020. The average cash deposit ratio of State Bank of India is 0.46%. The average value was very much lower than the ideal 5%, which shows that the bank was not able to make maximum use of its assets for getting the profit.

Return on assets ratio of Bank of India from the year 2008-2009 to the year 2019-2020 is given in the table 4.8

Table 4.8 Return on assets ratio of BOI

Year	Net Income (Rs in Millions)	Total Assets (Rs in millions)	Return on asset %
2008 - 2009	30073.463	2255017.671	1.33
2009 - 2010	17871.553	2749664.585	0.65
2010 - 2011	25424.171	3511725.491	0.72
2011 - 2012	27248.56	3845354.714	0.71
2012 - 2013	28198.979	4564068.028	0.62
2013 - 2014	29867.822	5781546.036	0.52
2014 - 2015	20129.05	6252847.415	0.32
2015 - 2016	-62042.596	6166292.347	-1.01
2016 - 2017	-78354.418	6320259.509	-1.24
2017 - 2018	-145466.006	6151843.398	-2.36
2018 - 2019	-203410.156	6308839.095	-3.22
2019 - 2020	-234655.835	6630188.399	-3.54
Mean	-45426.28442	5044803.891	-0.54
Standard Deviation	98871.2055	1575209.461	1.69
COV %	-217.65	31.22	-312.44
Growth %	-880.28	194.02	-365.38
Average Annual Growth %	-73.36	16.17	-30.45

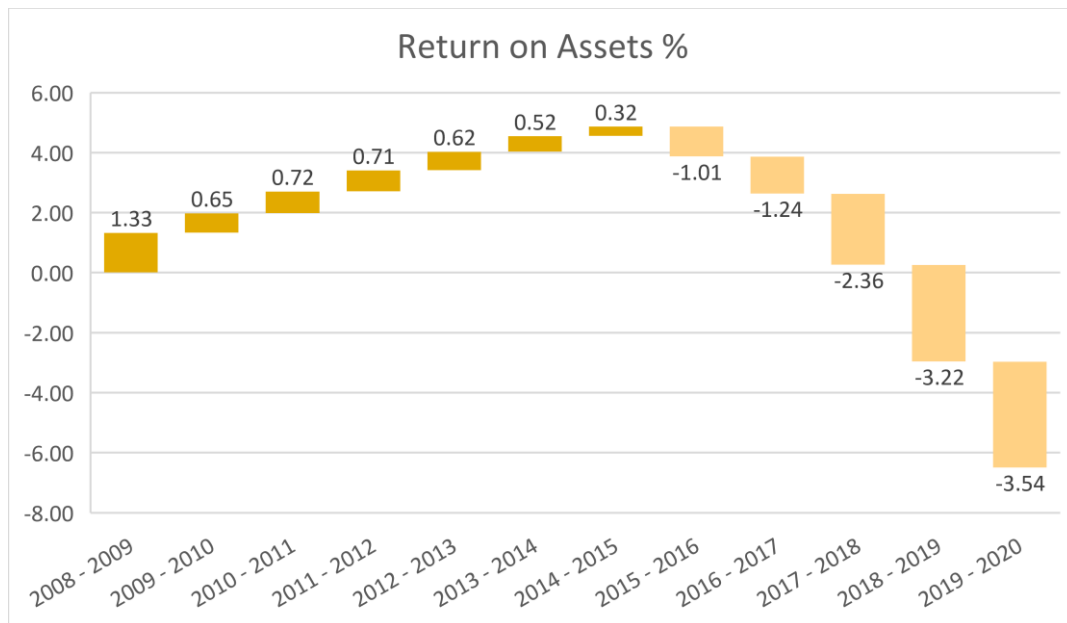


Chart 4.8 Return on assets ratio of BOI

INTERPRETATION

From the table 4.8, it can be interpreted that the return on assets ratio for the year 2008-2009 was 1.33% with net income 30073.463 million and total assets 2255017.671 million. For the 2009-2010, the return on assets ratio was 0.65% with net income 17871.553 million and total assets 2749664.585 million. The return on assets ratio for the period 2010-2011 was 0.72% and the net income and total assets for the year were 25424.171 million and 25424.171 million. For the following year, the ratio was 0.71%, while its net income was 27248.56 million and total assets were 3845354.714 million. During the year 2012-2013, the net income was 28198.979 million, the total assets were 4564068.028 million and the return on assets ratio was 0.62%. In the consecutive year, the return on assets ratio was 0.52%, the net income was 29867.822 million and the total assets were 5781546.036 million. The year 2014-2015, the return on assets ratio was 0.32%, the net income was 20129.05 million and the total assets were 6252847.415 million. In the year 2015-2016, it was recorded -62042.596 million as net income, 6166292.347 million as total assets and -1.01% as return on assets ratio. During the next year, the return on assets ratio was -1.24% with net income -78354.418 million and total assets 6320259.509 million. The return on assets ratio for the year 2017-2018 was -2.38%, while the net income and total assets were -145466.006 million and 6151843.398 million. The net income and total assets for the consecutive year were -203410.156 million and 6308839.095 million with return on assets ratio as -3.22%. At last, for the last year

in this paper 2019-2020, the net income, total assets and the return on assets ratio were -234655.835 million, 6630188.399 million and -3.54%. Bank of India has recorded that average net income and total assets were -45426.28442 million and 5044803.891 million. The average return on assets ratio for the study period 2008-2020 was -0.54%. The coefficient of variation of net income was -217.65%, total assets was 31.22% and that of return on assets ratio was -312.44%. It is evident that growth percentage of net income was -880.28% and that of total assets was 194.02%. Return on assets ratio's growth percentage is -365.38%. Bank of India's average annual growth percentage of net income and total assets were -73.36% and 16.17%, while the average annual growth percentage of return on assets ratio is -30.45%.

INFERENCE

The Return on assets ratio was highest (1.33%) during the year 2008-2009 and lowest (-3.54%) during the year 2019-2020. The average cash deposit ratio of Bank of India is -0.54%. The average value was very much lower than the ideal 5%, which shows that the bank was not able to make maximum use of its assets for getting the profit.

4.2 STATISTICAL ANALYSIS

4.2.1 DESCRIPTIVE STATISTICS

Descriptive Statistics					
	N	Minimum	Maximum	Mean	Std. Deviation
Credit Deposit Ratio - SBI	12	71.49	86.94	79.3083	5.64416
Credit Deposit Ratio - BOI	12	65.63	78.20	71.9158	4.70405
Cash Deposit Ratio - SBI	12	7.09	14.07	9.7525	2.32950
Cash Deposit Ratio - BOI	12	10.91	19.29	14.9308	2.86861
Investments - Deposit Ratio - SBI	12	27.57	39.20	32.7642	3.81342
Investments - Deposit Ratio - BOI	12	22.52	29.20	26.4058	2.43831
Return on Assets - SBI	12	-.39	.95	.4650	.47942
Return on Assets - BOI	12	-3.54	1.33	-.5417	1.69163
Valid N (listwise)	12				

INFERENCE

The result shows that the highest credit deposit ratio was 86.94% and lowest credit deposit ratio was 71.49% for the State Bank of India over the period of twelve years. The highest credit deposit ratio was 78.20% and lowest credit deposit ratio was 65.63% for the Bank of India over the period of twelve years. The highest cash deposit ratio was 14.07% and lowest cash deposit ratio was 7.09% for the State Bank of India over the period of twelve years. The highest cash deposit ratio was 19.29% and lowest cash deposit ratio was 10.91% for the Bank of India over the period of twelve years. The highest investment deposit ratio was 39.20% and lowest investment deposit ratio was 27.57% for the State Bank of India over the period of

twelve years. The highest investment deposit ratio was 29.20% and lowest investment deposit ratio was 22.52% for the Bank of India over the period of twelve years. The highest ROA was .95% and lowest ROA was -.39% for the State Bank of India over the period of twelve years. The highest ROA was 1.33% and lowest ROA was -3.54% for the State Bank of India over the period of twelve years. The general rule stated that the higher value of standard deviation implies greater spread of data, smaller the standard deviation shows the data is focused around mean. In such a case all the standard deviation is positive as well as higher in case of credit deposit ratio.

4.2.2 PAIRED SAMPLE T TEST

1. CREDIT DEPOSIT RATIO OF SBI VS CREDIT DEPOSIT RATIO OF BOI

Null Hypothesis (H0): There is no significant mean difference between the credit deposit ratio of SBI and credit deposit ratio of BOI.

Alternate Hypothesis (H1): There is significant mean difference between the credit deposit ratio of SBI and credit deposit ratio of BOI.

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Credit Deposit Ratio - SBI	79.3083	12	5.64416	1.62933
	Credit Deposit Ratio - BOI	71.9158	12	4.70405	1.35794

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Credit Deposit Ratio - SBI & Credit Deposit Ratio - BOI	12	.691	.013

Paired Samples Test								
	Paired Differences				t	df	Sig. (2-tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower				Upper

Pai	Credit	7.39	4.1554	1.1995	4.7522	10.032	6.16	11	.000
r 1	Deposit Ratio	250	8	8	4	76	3		
	- SBI - Credit								
	Deposit Ratio								
	- BOI								

Table 4.9 Paired sample t test: Credit deposit ratio

Pair	Mean	Std Dev	Calculated t value	Critical value	P value
Credit Deposit Ratio - SBI - Credit Deposit Ratio - BOI	7.39250	4.15548	6.163	2.201	<0.001

INTERPRETATION

The degree of freedom is 11 and the level of significance is 5%. The critical value is 2.201. Since the calculated t value (6.163) is greater than the critical value, we accept the alternate hypothesis.

Since P value is less than 0.01, we reject the null hypothesis at 1% level of significance.

Hence there is significant mean difference between the credit deposit ratio of SBI and credit deposit ratio of BOI.

INFERENCE

State Bank of India and Bank of India does not follow same lending pattern.

2. CASH DEPOSIT RATIO OF SBI VS CASH DEPOSIT RATIO OF BOI

Null Hypothesis (H₀): There is no significant mean difference between the cash deposit ratio of SBI and credit deposit ratio of BOI.

Alternate Hypothesis (H₁): There is significant mean difference between the cash deposit ratio of SBI and credit deposit ratio of BOI.

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Cash Deposit Ratio - SBI	9.7525	12	2.32950	.67247
	Cash Deposit Ratio - BOI	14.9308	12	2.86861	.82810

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Cash Deposit Ratio - SBI & Cash Deposit Ratio - BOI	12	-.755	.005

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Cash Deposit	-	4.8725	1.4065	-	-	-	11	.004
	Ratio - SBI -	5.17	4	8	8.2742	2.0824	3.68		
	Cash Deposit	833			0	7	2		
	Ratio - BOI								

Table 4.10 Paired sample t test: Cash deposit ratio

Pair	Mean	Std Dev	Calculated t value	Critical value	P value
Cash Deposit Ratio - SBI - Cash Deposit Ratio - BOI	-5.17833	4.87254	-3.682	2.201	.004

INTERPRETATION

The degree of freedom is 11 and the level of significance is 5%. The critical value is 2.201. Since the calculated t value (3.682) is greater than the critical value, we accept the alternate hypothesis.

Since P value is less than 0.05, we reject the null hypothesis at 5% level of significance.

Hence there is significant mean difference between the cash deposit ratio of SBI and credit deposit ratio of BOI.

INFERENCE

State Bank of India and Bank of India does not have the same cash in hand pattern.

3. INVESTMENT DEPOSIT RATIO OF SBI VS INVESTMENT DEPOSIT RATIO OF BOI

Null Hypothesis (H0): There is no significant mean difference between the investment deposit ratio of SBI and investment deposit ratio of BOI.

Alternate Hypothesis (H1): There is significant mean difference between the investment deposit ratio of SBI and investment deposit ratio of BOI.

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Investments - Deposit Ratio - SBI	32.7642	12	3.81342	1.10084
	Investments - Deposit Ratio - BOI	26.4058	12	2.43831	.70388

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Investments - Deposit Ratio - SBI & Investments - Deposit Ratio - BOI	12	.348	.267

Paired Samples Test								
	Paired Differences				t	df	Sig. (2-tailed)	
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower				Upper

Pai r 1	Investments - Deposit Ratio - SBI - Investments - Deposit Ratio - BOI	6.35 833	3.7431 2	1.0805 5	3.9800 7	8.7366 0	5.88 4	11	.000
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Table 4.11 Paired sample t test: Investment deposit ratio

Pair	Mean	Std Dev	Calculated t value	Critical value	P value
Investments - Deposit Ratio - SBI - Investments - Deposit Ratio - BOI	6.35833	3.74312	5.884	2.201	<0.001

INTERPRETATION

The degree of freedom is 11 and the level of significance is 5%. The critical value is 2.201. Since the calculated t value (5.884) is greater than the critical value, we accept the alternate hypothesis.

Since P value is less than 0.01, we reject the null hypothesis at 1% level of significance.

Hence there is significant mean difference between the investment deposit ratio of SBI and investment deposit ratio of BOI.

INFERENCE

State Bank of India and Bank of India does not have same investment pattern.

4. RETURN ON ASSETS RATIO OF SBI VS CREDIT DEPOSIT RATIO OF SBI

Null Hypothesis (H0): There is no significant mean difference between the return on assets ratio of SBI and credit deposit ratio of SBI.

Alternate Hypothesis (H1): There is significant mean difference between the return on assets ratio of SBI and credit deposit ratio of SBI.

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Return on Assets - SBI	.4650	12	.47942	.13840
	Credit Deposit Ratio - SBI	79.3083	12	5.64416	1.62933

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Return on Assets - SBI & Credit Deposit Ratio - SBI	12	.587	.045

Paired Samples Test								
	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			

Pai r 1	Return on Assets - SBI - Credit Deposit Ratio - SBI	- 78.84 333	5.3766 7	1.5521 1	- 82.259 50	- 75.427 16	- 50.7 98	11	.000
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Table 4.12 Paired sample t test: ROA vs CDR - SBI

Pair	Mean	Std Dev	Calculated t value	Critical value	P value
Return on Assets - SBI - Credit Deposit Ratio - SBI	-78.84333	5.37667	-50.798	2.201	<0.001

INTERPRETATION

The degree of freedom is 11 and the level of significance is 5%. The critical value is 2.201. Since the calculated t value (50.798) is greater than the critical value, we accept the alternate hypothesis.

Since P value is less than 0.01, we reject the null hypothesis at 1% level of significance.

Hence there is significant mean difference between the return on assets ratio of SBI and credit deposit ratio of SBI.

INFERENCE

Return on Assets and Credit deposit ratio of State Bank of India has mean differences between them in the mean ratio.

5. RETURN ON ASSETS RATIO OF BOI VS CREDIT DEPOSIT RATIO OF BOI

Null Hypothesis (H0): There is no significant mean difference between the return on assets ratio of BOI and credit deposit ratio of BOI.

Alternate Hypothesis (H1): There is significant mean difference between the return on assets ratio of BOI and credit deposit ratio of BOI.

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Return on Assets - BOI	-.5417	12	1.69163	.48833
	Credit Deposit Ratio - BOI	71.9158	12	4.70405	1.35794

Paired Samples Correlations				
		N	Correlation	Sig.
Pair 1	Return on Assets - BOI & Credit Deposit Ratio - BOI	12	.881	.000

Paired Samples Test								
	Paired Differences					t	df	Sig. (2-tailed)
	Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
				Lower	Upper			

Pai	Return on	-	3.3113	.95591	-	-	-	11	.000
r 1	Assets - BOI	72.45	6		74.561	70.353	75.8		
	- Credit	750			44	56	00		
	Deposit								
	Ratio - BOI								

Table 4.13 Paired sample t test: ROA vs CDR - BOI

Pair	Mean	Std Dev	Calculated t value	Critical value	P value
Return on Assets - BOI - Credit Deposit Ratio - BOI	-72.45750	3.31136	-75.800	2.201	<0.001

INTERPRETATION

The degree of freedom is 11 and the level of significance is 5%. The critical value is 2.201. Since the calculated t value (75.800) is greater than the critical value, we accept the alternate hypothesis.

Since P value is less than 0.01, we reject the null hypothesis at 1% level of significance.

Hence there is significant mean difference between the return on assets ratio of BOI and credit deposit ratio of BOI.

INFERENCE

Return on Assets and Credit deposit ratio of Bank of India has mean differences between them in the mean ratio.

4.2.3 CORRELATION ANALYSIS

1. RETURN ON ASSETS RATIO OF SBI VS CREDIT DEPOSIT RATIO OF SBI

Null Hypothesis (H0): There is no relationship between the return on assets ratio of SBI and credit deposit ratio of SBI.

Alternate Hypothesis (H1): There is relationship between the return on assets ratio of SBI and credit deposit ratio of SBI.

Correlations			
		Credit Deposit Ratio - SBI	Return on Assets - SBI
Credit Deposit Ratio - SBI	Pearson Correlation	1	.587*
	Sig. (2-tailed)		.045
	N	12	12
Return on Assets - SBI	Pearson Correlation	.587*	1
	Sig. (2-tailed)	.045	
	N	12	12
*. Correlation is significant at the 0.05 level (2-tailed).			

Table 4.14 Correlation: ROA vs CDR - SBI

	Credit Deposit Ratio - SBI	Return on Assets - SBI
Credit Deposit Ratio - SBI	1	.587
Return on Assets - SBI	.587	1

INTERPRETATION

Correlation coefficient between Return on Asset and Credit Deposit ratio of SBI is 0.587. The P value is 0.045.

Since P value is less than 0.05, we reject the null hypothesis at 5% level of significance.

Hence there is relationship between the return on assets ratio of SBI and credit deposit ratio of SBI.

INFERENCE

There is positive relationship between return on assets ratio of SBI and credit deposit ratio of SBI.

2. RETURN ON ASSETS RATIO OF BOI VS CREDIT DEPOSIT RATIO OF BOI

Null Hypothesis (H₀): There is no relationship between the return on assets ratio of BOI and credit deposit ratio of BOI.

Alternate Hypothesis (H₁): There is relationship between the return on assets ratio of BOI and credit deposit ratio of BOI.

Correlations			
		Credit Deposit Ratio - BOI	Return on Assets - BOI
Credit Deposit Ratio - BOI	Pearson Correlation	1	.881**
	Sig. (2-tailed)		.000
	N	12	12
Return on Assets - BOI	Pearson Correlation	.881**	1
	Sig. (2-tailed)	.000	
	N	12	12
**. Correlation is significant at the 0.01 level (2-tailed).			

Table 4.15 Correlation: ROA vs CDR - BOI

	Credit Deposit Ratio - SBI	Return on Assets - SBI
Credit Deposit Ratio - SBI	1	.881
Return on Assets - SBI	.881	1

INTERPRETATION

Correlation coefficient between Return on Asset and Credit Deposit ratio of SBI is .881. The P value is <0.001.

Since P value is less than 0.01, we reject the null hypothesis at 1% level of significance.

Hence there is relationship between the return on assets ratio of BOI and credit deposit ratio of BOI.

INFERENCE

There is positive relationship between return on assets ratio of BOI and credit deposit ratio of BOI.

4.2.4 REGRESSION MODEL

1. RETURN ON ASSETS RATIO OF SBI VS CREDIT DEPOSIT RATIO OF SBI

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.587 ^a	.345	.279	.40700	.345	5.263	1	10	.045
a. Predictors: (Constant), Credit Deposit Ratio - SBI									

Table 4.16 Regression model - SBI

Model	R	R square	Adjusted R square	Std. Error of the estimate
1	.587 ^a	.345	.279	.40700

The value of R² is equal to 0.345. It indicates that 34.5% variation of the dependent variable (ROA - SBI) can be explained by the selected independent variable i.e., credit - deposit ratio of SBI.

Null Hypothesis (H₀): There is no significant influence of return on assets ratio of SBI on credit deposit ratio of SBI.

Alternate Hypothesis (H₁): There is significant influence of return on assets ratio of SBI on credit deposit ratio of SBI.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.872	1	.872	5.263	.045 ^b
	Residual	1.657	10	.166		
	Total	2.528	11			
a. Dependent Variable: Return on Assets - SBI						
b. Predictors: (Constant), Credit Deposit Ratio - SBI						

Table 4.17 ANOVA - SBI

Model	Calculated F value	Critical value	P value
Return on Assets - SBI - Credit Deposit Ratio - SBI	5.263	4.9646	0.045

INTERPRETATION

The degree of freedom is 1 and 10 and the level of significance is 5%. The critical value is 4.9646. Since the calculated F value (5.263) is greater than the critical value, we accept the alternate hypothesis.

Since P value is less than 0.05, we reject the null hypothesis at 5% level of significance.

Hence there is significant influence of return on assets ratio of SBI on credit deposit ratio of SBI.

INFERENCE

The dependent variable ROA – SBI is influenced by Credit Deposit ratio of SBI.

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-3.491	1.728		-2.020	.071
	Credit Deposit Ratio - SBI	.050	.022	.587	2.294	.045
a. Dependent Variable: Return on Assets - SBI						

Table 4.18 Regression model Coefficients - SBI

Dependent Variable	Independent Variable	Intercept	Regression Coefficient
Return on Assets - SBI	Credit Deposit Ratio - SBI	-3.491	.050

The regression model is given by the formula,

$$Y = \alpha + \beta_1 X_1 + \varepsilon$$

Here, $Y = \text{Dependent Variable}$, $\alpha = \text{Intercept}$, $\beta_1 = \text{Regression Coefficient}$ and $X_1 = \text{Independent Variable}$

The study found the following model from the analysis:

$$\text{ROA - SBI} = -3.491 + 0.050 \text{ CDR - SBI}$$

Coefficient $\beta_1 = 0.050$ indicates that one unit increase in credit-deposit ratio causes 0.050-unit increase in return on assets. The P value is .045. So, we reject the null hypothesis at 5% level of significance. It can be concluded that credit-deposit ratio has a positive impact on return on assets, and it is statistically significant.

INFERENCE

The optimum credit deposit ratio of SBI enhances return on assets and that will be the ultimate effect on the financial health of banks.

2. RETURN ON ASSETS RATIO OF BOI VS CREDIT DEPOSIT RATIO OF BOI

Model Summary									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.881 ^a	.777	.754	.83868	.777	34.752	1	10	.000
a. Predictors: (Constant), Credit Deposit Ratio - BOI									

Table 4.19 Regression model - BOI

Model	R	R square	Adjusted R square	Std. Error of the estimate
1	.881 ^a	.777	.754	.83868

The value of R² is equal to 0.777. It indicates that 77.7% variation of the dependent variable (ROA - BOI) can be explained by the selected independent variable i.e., credit - deposit ratio of BOI.

Null Hypothesis (H₀): There is no significant influence of return on assets ratio of BOI on credit deposit ratio of BOI.

Alternate Hypothesis (H₁): There is significant influence of return on assets ratio of BOI on credit deposit ratio of BOI.

ANOVA ^a						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	24.444	1	24.444	34.752	.000 ^b
	Residual	7.034	10	.703		
	Total	31.478	11			
a. Dependent Variable: Return on Assets - BOI						
b. Predictors: (Constant), Credit Deposit Ratio - BOI						

Table 4.20 ANOVA- BOI

Model	Calculated F value	Critical value	P value
Return on Assets - SBI - Credit Deposit Ratio - SBI	34.752	4.9646	<0.001

INTERPRETATION

The degree of freedom is 1 and 10 and the level of significance is 5%. The critical value is 4.9646. Since the calculated F value (34.752) is greater than the critical value, we accept the alternate hypothesis.

Since P value is less than 0.01, we reject the null hypothesis at 1% level of significance.

Hence there is significant influence of return on assets ratio of BOI on credit deposit ratio of BOI.

INFERENCE

The dependent variable ROA – BOI is influenced by Credit Deposit ratio of BOI.

Coefficients^a						
Model		Unstandardized Coefficients		Standardize d Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-23.331	3.873		-6.023	.000
	Credit Deposit Ratio - BOI	.317	.054	.881	5.895	.000
a. Dependent Variable: Return on Assets - BOI						

Table 4.21 Regression model Coefficient - BOI

Dependent Variable	Independent Variable	Intercept	Regression Coefficient
Return on Assets - BOI	Credit Deposit Ratio - BOI	-23.331	.317

The regression model is given by the formula,

$$Y = \alpha + \beta_1 X_1 + \varepsilon$$

Here, $Y = \text{Dependent Variable}$, $\alpha = \text{Intercept}$, $\beta_1 = \text{Regression Coefficient}$ and $X_1 = \text{Independent Variable}$

The study found the following model from the analysis:

$$\text{ROA - SBI} = -23.331 + 0.317 \text{ CDR - SBI}$$

Coefficient $\beta_1 = 0.317$ indicates that one unit increase in credit-deposit ratio causes 0.317-unit increase in return on assets. The P value is <0.001 . So, we reject the null hypothesis at 1% level of significance. It can be concluded that credit-deposit ratio has a positive impact on return on assets, and it is statistically significant.

INFERENCE

The optimum credit deposit ratio of BOI enhances return on assets and that will be the ultimate effect on the financial health of banks.

CHAPTER 5

FINDINGS, SUGGESTIONS AND CONCLUSION

5.1 FINDINGS

- The credit deposit ratio was highest (86.94%) during the year 2012-2013 and lowest (71.49%) during the year 2017-2018. The average credit deposit ratio of State Bank of India is 79.31%. The average value is more or less equal to the ideal value, this shows that the bank was making full use of the resource and has enough liquidity to cover the unforeseen fund requirements.
- The credit deposit ratio was highest (78.20%) during the year 2011-2012 and lowest (65.63%) during the year 2018-2019. The average credit deposit ratio of Bank of India is 71.92%. The average value is much lower than the ideal value, this shows that the bank was not making full use of the resource.
- The cash deposit ratio was highest (14.07%) during the year 2008-2009 and lowest (7.09%) during the year 2017-2018. The average cash deposit ratio of State Bank of India is 9.75%. The average value is much lower than the ideal value, this shows that the bank does not have enough cash in hand when compared with ideal value.
- The cash deposit ratio was highest (19.29%) during the year 2015-2016 and lowest (10.91%) during the year 2011-2012. The average cash deposit ratio of Bank of India is 14.93%. The average value is much lower than the ideal value, this shows that the bank does not have enough cash in hand when compared with ideal value.
- The investment deposit ratio was highest (39.20%) during the year 2017-2018 and lowest (27.57%) during the year 2015-2016. The average cash deposit ratio of State Bank of India is 32.76%. The average value shows how much the bank invests from the deposited amount.
- The investment deposit ratio was highest (29.20%) during the year 2009-2010 and lowest (22.52%) during the year 2014-2015. The average cash deposit ratio of Bank of India is 26.41%. The average value shows how much the bank invests from the deposited amount.
- The Return on assets ratio was highest (0.95%) during the year 2008-2009 and lowest (-0.02%) during the year 2019-2020. The average cash deposit

ratio of State Bank of India is 0.46%. The average value was very much lower than the ideal 5%, which shows that the bank was not able to make maximum use of its assets for getting the profit.

- The Return on assets ratio was highest (1.33%) during the year 2008-2009 and lowest (-3.54%) during the year 2019-2020. The average cash deposit ratio of Bank of India is -0.54%. The average value was very much lower than the ideal 5%, which shows that the bank was not able to make maximum use of its assets for getting the profit.
- The result shows that the highest credit deposit ratio was 86.94% and lowest credit deposit ratio was 71.49% for the State Bank of India over the period of twelve years. The highest credit deposit ratio was 78.20% and lowest credit deposit ratio was 65.63% for the Bank of India over the period of twelve years. The highest cash deposit ratio was 14.07% and lowest cash deposit ratio was 7.09% for the State Bank of India over the period of twelve years. The highest cash deposit ratio was 19.29% and lowest cash deposit ratio was 10.91% for the Bank of India over the period of twelve years. The highest investment deposit ratio was 39.20% and lowest investment deposit ratio was 27.57% for the State Bank of India over the period of twelve years. The highest investment deposit ratio was 29.20% and lowest investment deposit ratio was 22.52% for the Bank of India over the period of twelve years. The highest ROA was .95% and lowest ROA was -.39% for the State Bank of India over the period of twelve years. The highest ROA was 1.33% and lowest ROA was -3.54% for the State Bank of India over the period of twelve years. The general rule stated that the higher value of standard deviation implies greater spread of data, smaller the standard deviation shows the data is focused on mean. In such a case all the standard deviation is positive as well as higher in case of credit deposit ratio.
- State Bank of India and Bank of India does not follow same lending pattern.
- State Bank of India and Bank of India does not have the same cash in hand pattern.
- State Bank of India and Bank of India does not have same investment pattern.

- Return on Assets and Credit deposit ratio of State Bank of India and Bank of India has mean differences between them in the mean ratio.
- Return on Assets and Credit deposit ratio of Bank of India has mean differences between them in the mean ratio.
- There is positive relationship between return on assets ratio of SBI and credit deposit ratio of SBI.
- There is positive relationship between return on assets ratio of BOI and credit deposit ratio of BOI.
- The dependent variable ROA – SBI is influenced by Credit Deposit ratio of SBI.
- The optimum credit deposit ratio of SBI enhances return on assets and that will be the ultimate effect on the financial health of banks.
- The dependent variable ROA – BOI is influenced by Credit Deposit ratio of BOI.
- The optimum credit deposit ratio of BOI enhances return on assets and that will be the ultimate effect on the financial health of banks.

5.2 SUGGESTIONS

CREDIT DEPOSIT RATIO: On comparing Credit deposit ratio of State bank of India and Bank of India, we can see that the average credit deposit ratio of SBI is better than BOI, yet it is slightly lower than the ideal 80 – 90%. On an average, SBI was able to cover the unforeseen fund requirements with liquidity, while BOI was unable to make full use of funds. From, paired t test, we can understand that SBI and BOI does not have same lending pattern. We can see that, during the start of the global recession, the credit deposit ratio was 73.11%, but SBI recovers and becomes 78.58% by the end of 2010. On the other hand, at the beginning, the ratio was 75.33% but at the end it reduces to 73.33% for BOI. As of before the COVID – 19 recession, we can see that the ratio was reduced by -1.88% for SBI (71.73%) and by -11.73% for BOI (66.50%). We can see that; both the banks should maintain the Advances and Deposits ratio between 80-90% to get over the COVID - 19 recession.

CASH DEPOSIT RATIO: On comparing Cash deposit ratio of State bank of India and Bank of India, we can see that the average cash deposit ratio of BOI is better than SBI, even though it is nowhere near the ideal value i.e., 60%. While comparing the average values, we can see that the ratio of BOI is better than SBI. This shows that BOI had some cash in hand more compared to SBI. But we can also see that both the banks don't care about giving assurance to the customers. From, paired t test, we can understand that State Bank of India and Bank of India does not have the same cash in hand pattern. We can see that, during the start of the global recession, the cash deposit ratio was 14.07%, but SBI fails to recover and becomes 11.96% by the end of 2010. On the other hand, at the beginning, the ratio was 11.47% but at the end it improves to 13.59% for BOI. As of before the COVID – 19 recession, we can see that the ratio was reduced by -44.94% for SBI (7.75%) and increased by 35.46% for BOI (15.54%). We can see that; both the banks should at least maintain the cash deposit ratio above the average percentage of the bank to get over the COVID - 19 recession.

INVESTMENT DEPOSIT RATIO:

On comparing Investment deposit ratio of State bank of India and Bank of India, we can see that the average investment deposit ratio of SBI is better than BOI. This shows that SBI made more investments in government securities compared to BOI.

It is not mandatory to be ideal percentage value as the investments not only leads to profit but also loss sometimes. From, paired t test, we can understand that State Bank of India and Bank of India does not have the same investment pattern. We can see that, during the start of the global recession, the investment deposit ratio was 37.19%, but SBI fails to recover and becomes 35.54% by the end of 2010. On the other hand, at the beginning, the ratio was 27.73% but at the end it improves to 29.20% for BOI. As of before the COVID – 19 recession, we can see that the ratio was reduced by -13.15% for SBI (32.30%) and increased by 5.02% for BOI (29.12%). We can see that; both the banks should at least maintain the investment deposit ratio above the average percentage of the bank to get over the COVID - 19 recession.

RETURN ON ASSETS RATIO:

On comparing return on assets ratio of State bank of India and Bank of India, we can see that the average return on assets ratio of SBI is better than BOI, even though it is nowhere near the ideal value i.e., above 5%. While comparing the average values, we can see that the ratio of SBI is better than BOI. This shows that SBI made more profit from assets compared to BOI. But in both the cases, the return rate keeps on decreasing. From, paired t test, we can understand that return on assets and credit deposit ratio of SBI and BOI has mean differences between them in mean ratio. We can see that, during the start of the global recession, return on assets ratio was 0.95%, but SBI does not recovers and so it becomes 0.87% by the end of 2010. On the other hand, at the beginning, the ratio was 1.33% but at the end it reduces to 0.65% for BOI. As of before the COVID – 19 recession, we can see that the ratio was reduced by -101.97% for SBI (-0.02%) and by -365.38% for BOI (-3.54%). We can see that; both the banks have the ratio in negative. It was better if the value increase to positive and be above 5% to get over the COVID - 19 recession.

ROA VS CDR:

Even though the CDR and ROA of both the banks have mean difference between them, from the correlation analysis we can understand that these two values have positive relationship between them, i.e., if one increases other also increases. So,

in order to maintain the positive financial health of the bank, the bank must maintain optimum credit deposit ratio.

5.3 CONCLUSION

From the study, we can conclude that from the two banks considered, we can learn a lot of things to be done during recession period and to maintain the financial profitability of the bank. As of the credit deposit ratio, it would be better to maintain the ideal 80 – 90%. As it looks from the comparison that the banks don't care much about giving assurance to the customers, so the cash deposit ratio can be any value or the ideal 60%. The investment deposit ratio has no ideal value, so it can be any value. It would always be better if the return on assets is more than 5%. We can also use regression model to come up with a proper value for a specified bank. It also advisable to maintain an optimum credit deposit value to maintain the profitability of the bank.

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ANNEXURE - I

Data from Annual report of State Bank of India:

Year	Advances (Rs in millions)	Deposits (Rs in millions)	Cash (Rs in millions)	Investments (Rs in millions)	Net Income (Rs in Millions)	Total Assets (Rs in millions)
2008 - 2009	5425032.042	7420731.28	1044037.986	2759539.569	91215.658	9644320.807
2009 - 2010	6319141.52	8041162.268	961838.416	2857900.706	91663.923	10534137.31
2010 - 2011	7567194.48	9339328.13	1228741.477	2956005.69	82648.583	12237362.01
2011 - 2012	8675788.901	10436473.62	971631.649	3121976.103	117133.394	13355192.31
2012 - 2013	10456165.53	12027395.74	1148201.645	3509272.716	141053.242	15662610.4
2013 - 2014	12098287.19	13944085.05	1325496.327	3983081.898	108915.11	17922345.99
2014 - 2015	13000263.93	15767932.45	1748613.037	4950273.952	131018.968	20480798
2015 - 2016	14637004.18	17307224.36	1296671.636	4770972.765	99509.785	22590630.33
2016 - 2017	15710783.81	20447513.95	1719716.498	7659896.309	104844.194	27059663.04
2017 - 2018	19348801.89	27063432.85	1918986.419	10609867.15	- 129548.266	34547519.97

2018 - 2019	21858769.18	29113860.11	2224901.15	9670219.475	142163.388	36809142.49
2019 - 2020	23252895.61	32416207.34	2510970.054	10469545.18	-7379.448	39513939.18

Data from Annual report of Bank of India:

Year	Advances (Rs in millions)	Deposits (Rs in millions)	Cash (Rs in millions)	Investments (Rs in millions)	Net Income (Rs in Millions)	Total Assets (Rs in millions)
2008 - 2009	1429093.738	1897084.797	217612.556	526071.791	30073.463	2255017.671
2009 - 2010	1684907.098	2297619.439	312301.338	670801.795	17871.553	2749664.585
2010 - 2011	2130961.817	2988858.063	373099.89	858724.176	25424.171	3511725.491
2011 - 2012	2488333.442	3182160.332	347112.545	867535.861	27248.56	3845354.714
2012 - 2013	2893674.972	3818395.859	548358.594	946134.318	28198.979	4564068.028
2013 - 2014	3707335.364	4769740.518	613822.938	1141524.37	29867.822	5781546.036
2014 - 2015	4020255.465	5319066.346	764036.956	1197920.482	20129.05	6252847.415
2015 - 2016	3613018.908	5157224.8	995047.182	1226209.086	-62042.596	6166292.347
2016 -	3683287.647	5423521.148	964647.089	1307512.629	-78354.418	6320259.509

2017						
2017 - 2018	3432889.205	5229969.037	960242.325	1403210.71	- 145466.006	6151843.398
2018 - 2019	3429663.402	5225549.623	948599.95	1509050.173	- 203410.156	6308839.095
2019 - 2020	3706440.848	5573864.271	866090.593	1623229.081	- 234655.835	6630188.399

ANNEXURE - II
ANALYSIS OF ADVANCES AND DEPOSITS OF COMMERCIAL BANKS

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ABSTRACT:

Advances and Deposit management is an important part of the banking management process, which helps in managing the financial risk of the bank. By comparing the advances and deposits over the years, we can come up with a proper strategy during the recession time. Therefore, in this research, the advances and deposits of two commercial banks, Bank of India and State Bank of India are compared during the period from 2008 – 2009 to 2019 – 2020. Here, we can cover Global recession from 2008 – 2010 and include the beginning of COVID – 19 recession. In this study, using this comparison study we can come up with a strategy for COVID – 19 recession.

Keywords – Advances, Deposits, Commercial Banks, Credit – Deposit Ratio, Return on assets, Profitability

I. INTRODUCTION

Deposits and Advances management is an important tool through which we can determine the bank's liquidity, and this is also used to find the financial performance of the bank. Through this, we can also manage the financial risks of the bank. There are three main types of financial risks that can affect the performance of the banks. The risks are credit risk, operational risk, market risk and liquidity risk.

Credit risk occurs when the borrowers fail to pay back the obligations. It is tough to protect the bank from this risk. Operational risk occurs because of loss due to error caused by people, process, and system. These are usually internal mistakes that are made during transactions. But, sometimes, these occur in a large scale because of breaching by hackers. Market risk occurs because of unpredictability of equity markets, commodity prices, interest rates, and credit spreads. The banks involved in sales and trading are more exposed to this type of risk. Liquidity risk occurs because of inability of bank to pay back cash and do day to day operations. The main reason for this type of risk is that bank depend more on short term funds. The risks above can be controlled by practicing the advances and deposit management.

II. PROBLEM STATEMENT

The problem is significant because of COVID-19, the whole world underwent recession period after the global

recession. The banks have to maintain a proper condition in order to stabilize the profitability of the bank even during the recession period. In this study, we will analyze the strategy followed during the previous recession and come up with the proper strategy to be followed during the future recessions.

III. REVIEW OF LITERATURE

K.V.S.Gayathri, M.Chandraiah (2020) in their paper "A Study On Financial Performance of Indian Commercial Banks" has mentioned about the comparison of financial performance of commercial banks in India. This study says that the performance of any economy can analysed by the performance of banks in that place. In this study, the secondary data is considered and pointed out that State Bank of India performed better when compared with other commercial banks of India.

Grant Thronton (2020) in their paper "COVID – 19: Impact on the Indian Shadow Banking Sector" talks about how the investment to be categorised by banks as Held to Maturity even in excess of 25% of total investment permitted to be included in the HTM portfolio thereby, providing protection against mark to market losses. This study mentioned how not only was the physical health was affected but also financial health of the country.

Prahallad Chandra Das FCMA (2020) in their paper "Impact of Advance- Deposit Ratio (ADR) on Financial Performance: Panel Evidence from Commercial Banks in Bangladesh" has strongly emphasized that the optimum advance deposit ratio has its impact on return on assets, which in turn has effect on the financial health of the bank. This study analyses the commercial banks of Bangladesh from 2000 to 2016. In this study, 10 commercial banks are considered.

K. Surya Suganya (2017) in their Paper "Global Recession and Its Impact on Indian Financial Markets" talks about the impact of global recession on the Indian economy. This study points out that the manufacturing industry is the key for providing jobs to the large number.

IV. MATERIALS AND METHODS

A. RESEARCH DESIGN

Correlational research attempts to determine the extent of a relationship between two or more variables using statistical data. In this type of design, relationships between and among a number of facts are sought and interpreted. This type of research will recognize trends and patterns in data, but it does not go so far in its analysis to prove causes for these observed patterns.

B. OBJECTIVES OF THE RESEARCH

1. To evaluate and compare the credit- deposit ratio of both SBI and BOI banks.
2. To determine the lending pattern of the two banks during the period from 2008 – 2009 to 2019 – 2020
3. To study the pattern and come up with a strategy accordingly.

C. SAMPLING DESIGN

Secondary quantitative research is also known as desk research. In this research method, researchers use the already existing data also known as secondary data. This existing data is then summarized and arranged to increase the overall efficacy of the research.

D. DATA COLLECTION DESIGN

Secondary Data is collected from the annual reports of the two commercial banks mentioned i.e., State Bank of India and Bank of India

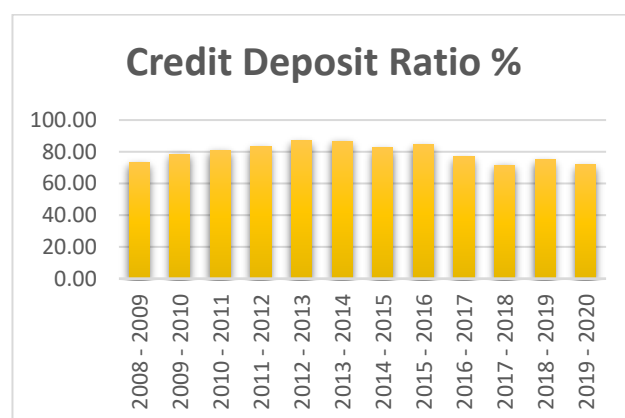
V. DATA ANALYSIS

TABLE 1 CREDIT DEPOSIT OF SBI

Year	Advances (Rs in millions)	Deposits (Rs in millions)	Cred it Depo sit Ratio %
2008 - 2009	54,25,032.04	74,20,731.28	73.11
2009 - 2010	63,19,141.52	80,41,162.27	78.58
2010 - 2011	75,67,194.48	93,39,328.13	81.03
2011 - 2012	86,75,788.90	1,04,36,473.62	83.13
2012 - 2013	1,04,56,165.53	1,20,27,395.74	86.94
2013 - 2014	1,20,98,287.19	1,39,44,085.05	86.76
2014 - 2015	1,30,00,263.93	1,57,67,932.45	82.45
2015 - 2016	1,46,37,004.18	1,73,07,224.36	84.57

2016 - 2017	1,57,10,783.81	2,04,47,513.95	76.83
2017 - 2018	1,93,48,801.89	2,70,63,432.85	71.49
2018 - 2019	2,18,58,769.18	2,91,13,860.11	75.08
2019 - 2020	2,32,52,895.61	3,24,16,207.34	71.73
Mean	1,31,95,844.02	1,69,43,778.93	79.31
Standard Deviation	5961903.181	8565214.428	5.64316186
COV %	45.18	50.55	7.12
Growth %	328.62	336.83	-1.88
Average Annual Growth %	27.39	28.07	-0.16

FIG 1 CREDIT DEPOSIT OF SBI



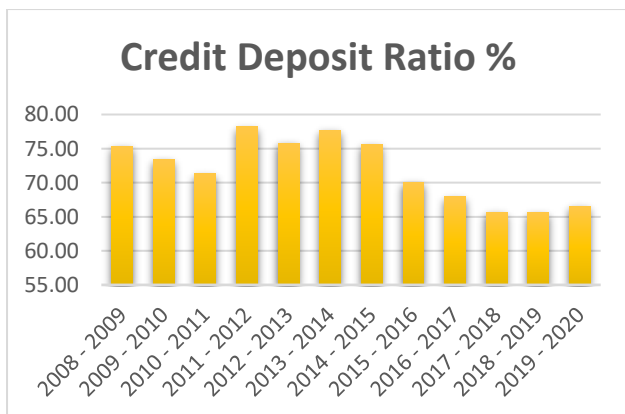
It is inferred from Table 1 and Fig 1 that the credit deposit ratio was highest (86.94%) during the year 2012-2013 and lowest (71.49%) during the year 2017-2018. The average credit deposit ratio of State Bank of India is 79.31%. The average value is more or less equal to the ideal value, this shows that the bank was making full use of the resource and has enough liquidity to cover the unforeseen fund requirements.

TABLE 2 CREDIT DEPOSIT OF BOI

Year	Advances (Rs in millions)	Deposits (Rs in millions)	Credit Deposit Ratio %
2008 - 2009	14,29,093.74	18,97,084.80	75.33
2009 - 2010	16,84,907.10	22,97,619.44	73.33
2010 - 2011	21,30,961.82	29,88,858.06	71.30

2011 - 2012	24,88,333.44	31,82,160.33	78.20
2012 - 2013	28,93,674.97	38,18,395.86	75.78
2013 - 2014	37,07,335.36	47,69,740.52	77.73
2014 - 2015	40,20,255.47	53,19,066.35	75.58
2015 - 2016	36,13,018.91	51,57,224.80	70.06
2016 - 2017	36,83,287.65	54,23,521.15	67.91
2017 - 2018	34,32,889.21	52,29,969.04	65.64
2018 - 2019	34,29,663.40	52,25,549.62	65.63
2019 - 2020	37,06,440.85	55,73,864.27	66.50
Mean	30,18,321.83	42,40,254.52	71.92
Standard Deviation	877833.267	1332864.228	4.703688207
COV %	29.08	31.43	6.54
Growth %	159.36	193.81	-11.73
Average Annual Growth %	13.28	16.15	-0.98

FIG 2 CREDIT DEPOSIT OF BOI

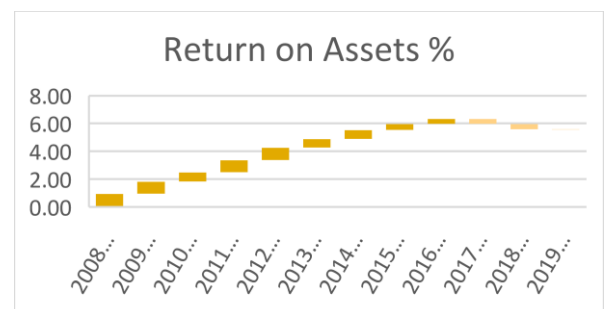


It is inferred from the Table 2 and Fig 2 that the credit deposit ratio was highest (78.20%) during the year 2011-2012 and lowest (65.63%) during the year 2018-2019. The average credit deposit ratio of Bank of India is 71.92%. The average value is much lower than the ideal value, this shows that the bank was not making full use of the resource.

TABLE 3 RETURN ON ASSETS RATIO OF SBI

Year	Net Income (Rs in Millions)	Total Assets (Rs in millions)	Return on Assets %
2008 - 2009	91215.658	9644320.807	0.95
2009 - 2010	91663.923	10534137.31	0.87
2010 - 2011	82648.583	12237362.01	0.68
2011 - 2012	117133.394	13355192.31	0.88
2012 - 2013	141053.242	15662610.4	0.90
2013 - 2014	108915.11	17922345.99	0.61
2014 - 2015	131018.968	20480798	0.64
2015 - 2016	99509.785	22590630.33	0.44
2016 - 2017	104844.194	27059663.04	0.39
2017 - 2018	-129548.266	34547519.97	-0.37
2018 - 2019	-142163.388	36809142.49	-0.39
2019 - 2020	-7379.448	39513939.18	-0.02
Mean	57409.31292	21696471.82	0.46
Standard Deviation	97510.03199	10538245.78	0.48
COV %	169.85	48.57	103.23
Growth %	-108.09	309.71	-101.97
Average Annual Growth %	-9.01	25.81	-8.50

FIG 3 RETURN ON ASSETS RATIO OF SBI



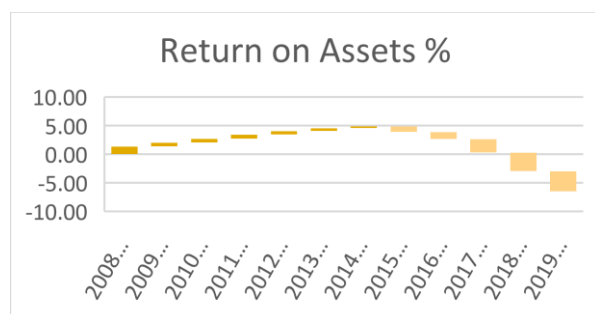
It is inferred from the Table 3 and Fig 3 that the Return on assets ratio was highest (0.95%) during the year 2008-2009 and lowest (-0.02%) during the year 2019-2020. The average cash deposit ratio of State Bank of India is 0.46%. The average value was very much lower than the

ideal 5%, which shows that the bank was not able to make maximum use of its assets for getting the profit.

TABLE 4 RETURN ON ASSETS RATIO OF BOI

Year	Net Income (Rs in Millions)	Total Assets (Rs in millions)	Return on asset %
2008 - 2009	30073.463	2255017.67 1	1.33
2009 - 2010	17871.553	2749664.58 5	0.65
2010 - 2011	25424.171	3511725.49 1	0.72
2011 - 2012	27248.56	3845354.71 4	0.71
2012 - 2013	28198.979	4564068.02 8	0.62
2013 - 2014	29867.822	5781546.03 6	0.52
2014 - 2015	20129.05	6252847.41 5	0.32
2015 - 2016	-62042.596	6166292.34 7	-1.01
2016 - 2017	-78354.418	6320259.50 9	-1.24
2017 - 2018	-145466.006	6151843.39 8	-2.36
2018 - 2019	-203410.156	6308839.09 5	-3.22
2019 - 2020	-234655.835	6630188.39 9	-3.54
Mean	45426.2844 2	5044803.89 1	-0.54
Standard Deviation	98871.2055	1575209.46 1	1.69
COV %	-217.65	31.22	-312.44
Growth %	-880.28	194.02	-365.38
Average Annual Growth %	-73.36	16.17	-30.45

FIG 4 RETURN ON ASSETS RATIO OF BOI



It is inferred from the Table 4 and Fig 4 that the Return on assets ratio was highest (1.33%) during the year 2008-2009 and lowest (-3.54%) during the year 2019-2020. The average cash deposit ratio of Bank of India is -0.54%. The average value was very much lower than the ideal 5%, which shows that the bank was not able to make maximum use of its assets for getting the profit.

TABLE 5 CREDIT DEPOSIT RATIO OF SBI VS CREDIT DEPOSIT RATIO OF BOI

Paired Samples Statistics					
		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Credit Deposit Ratio - SBI	79.3083	12	5.64416	1.62933
	Credit Deposit Ratio - BOI	71.9158	12	4.70405	1.35794

Paired Samples Test									
		Paired Differences					t	df	Sig. (2-tailed)
		Mean	Std. Deviation	Std. Error Mean	95% Confidence Interval of the Difference				
					Lower	Upper			
Pair 1	Credit Deposit Ratio - SBI	7.3925	4.15548	1.19958	4.75224	10.03276	6.163	11	.000
	Credit Deposit Ratio - BOI								

It is inferred from Table 5 that State Bank of India and Bank of India does not follow same lending pattern.

TABLE 6 RETURN ON ASSETS RATIO OF SBI VS CREDIT DEPOSIT RATIO OF SBI

Correlations			
		Credit Deposit Ratio - SBI	Return on Assets - SBI
Credit Deposit Ratio - SBI	Pearson Correlation	1	.587*
	Sig. (2-tailed)		.045
	N	12	12
Return on Assets - SBI	Pearson Correlation	.587*	1
	Sig. (2-tailed)	.045	
	N	12	12

*. Correlation is significant at the 0.05 level (2-tailed).

It is inferred from Table 6 that there is positive relationship between return on assets ratio of SBI and credit deposit ratio of SBI.

TABLE 7 RETURN ON ASSETS RATIO OF BOI VS CREDIT DEPOSIT RATIO OF BOI

Correlations			
		Credit Deposit Ratio - BOI	Return on Assets - BOI
Credit Deposit Ratio - BOI	Pearson Correlation	1	.881**
	Sig. (2-tailed)		.000
	N	12	12
Return on Assets - BOI	Pearson Correlation	.881**	1
	Sig. (2-tailed)	.000	
	N	12	12

** . Correlation is significant at the 0.01 level (2-tailed).

It is inferred from Table 7 that there is positive relationship between return on assets ratio of BOI and credit deposit ratio of BOI.

VI. FINDINGS

- The credit deposit ratio was highest (86.94%) during the year 2012-2013 and lowest (71.49%) during the year 2017-2018. The average credit deposit ratio of State Bank of India is 79.31%. The average value is more or less equal to the ideal value, this shows that the bank was making full use of the resource and has enough liquidity to cover the unforeseen fund requirements.
- The credit deposit ratio was highest (78.20%) during the year 2011-2012 and lowest (65.63%) during the year 2018-2019. The average credit deposit ratio of Bank of India is 71.92%. The average value is much lower than the ideal value, this shows that the bank was not making full use of the resource.
- State Bank of India and Bank of India does not follow same lending pattern.
- There is positive relationship between return on assets ratio of SBI and credit deposit ratio of SBI.
- There is positive relationship between return on assets ratio of BOI and credit deposit ratio of BOI.

VII. RECOMMENDATIONS

CREDIT DEPOSIT RATIO: On comparing Credit deposit ratio of State bank of India and Bank of India, we can see that the average credit deposit ratio of SBI is better than BOI, yet it is slightly lower than the ideal 80 –

90%. On an average, SBI was able to cover the unforeseen fund requirements with liquidity, while BOI was unable to make full use of funds. From, paired t test, we can understand that SBI and BOI does not have same lending pattern. We can see that, during the start of the global recession, the credit deposit ratio was 73.11%, but SBI recovers and becomes 78.58% by the end of 2010. On the other hand, at the beginning, the ratio was 75.33% but at the end it reduces to 73.33% for BOI. As of before the COVID – 19 recession, we can see that the ratio was reduced by -1.88% for SBI (71.73%) and by -11.73% for BOI (66.50%). We can see that; both the banks should maintain the Advances and Deposits ratio between 80-90% to get over the COVID - 19 recession.

RETURN ON ASSETS RATIO:

On comparing return on assets ratio of State bank of India and Bank of India, we can see that the average return on assets ratio of SBI is better than BOI, even though it is nowhere near the ideal value i.e., above 5%. While comparing the average values, we can see that the ratio of SBI is better than BOI. This shows that SBI made more profit from assets compared to BOI. But in both the cases, the return rate keeps on decreasing. From, paired t test, we can understand that return on assets and credit deposit ratio of SBI and BOI has mean differences between them in mean ratio. We can see that, during the start of the global recession, return on assets ratio was 0.95%, but SBI does not recovers and so it becomes 0.87% by the end of 2010. On the other hand, at the beginning, the ratio was 1.33% but at the end it reduces to 0.65% for BOI. As of before the COVID – 19 recession, we can see that the ratio was reduced by -101.97% for SBI (-0.02%) and by -365.38% for BOI (-3.54%). We can see that; both the banks have the ratio in negative. It was better if the value increase to positive and be above 5% to get over the COVID - 19 recession.

ROA VS CDR:

Even though the CDR and ROA of both the banks have mean difference between them, from the correlation analysis we can understand that these two values have positive relationship between them, i.e., if one increases other also increases. So, in order to maintain the positive financial health of the bank, the bank must maintain optimum credit deposit ratio.

VIII. CONCLUSION

From the study, we can conclude that from the two banks considered, we can learn a lot of things to be done during recession period and to maintain the financial profitability of the bank. As of the credit deposit ratio, it would be better to maintain the ideal 80 – 90%. As it looks from the comparison that the banks don't care much about giving assurance to the customers, so the cash deposit ratio can be any value or the ideal 60%. The investment deposit ratio has no ideal value, so it can be any value. It would

always be better if the return on assets is more than 5%.
We can also use regression model to come up with a proper value for a specified bank. It also advisable to maintain an optimum credit deposit value to maintain the profitability of the bank.

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