

Evaluation of Deposit-Advances Management of Commercial Banks

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Abstract: The research aims at evaluating deposit-advances management of commercial banks in India during the period from 2006-07 to 2015-16. The data has been collected from the annual reports published by both HDFC Bank and IDBI Bank, Reserve Bank of India's periodic bulletins and publications of the Indian Banks Association. Statistical techniques like percentage, averages; coefficient of variation, Paired sample t-test has been applied. This research is limited to one nationalized bank and one private of India and for a period of only ten years starting from 2006-07 till 2015-16. It may not be applicable across the banking sector in India or around the world. The study reveals that the credit-deposit ratio of HDFC bank was comparatively low throughout the study period, indicating that the IDBI bank does not have enough liquidity to cover its future financial obligations or uncertain funding requirements. The Cash-Deposit ratio of both the banks showed that HDFC Bank provides better assurance to their customers that the bank has sufficient funds to pay them back whenever they want to withdraw the same.

Keywords: Advances, Credit Risk, Deposit, Liquidity Risk and Interest Risk

1 INTRODUCTION

Deposit- Advances Management is an important part of the overall banking management process, through which financial risk is managed. Financial risk can involve interest rate fluctuations which can adversely affect the liquidity position of the business. Banks and other financial institution are vulnerable to different type of risk. There are three types of risk: Credit Risk - Banks and financial institutions face a number of risks in their day to day operations, one such risk is credit risk. Credit risk is when the borrower fails to meet its repayment obligations to the lender. It is a loss for the lender as he may not receive the interest and principal that the borrower is supposed to pay back to him. Credit risk affects the overall cash flows of the bank. It also leads to an increase in other costs, such as, collection costs. Interest Risk-The interest rate risk, or market risk, refers to the possibility that investments in bonds – also known as fixed-income securities – will suffer as the result of unexpected interest rate changes. As interest rate increases, bond prices fall and vice versa. The level of sensitivity of bond prices with the interest rate will determine the actual impact on the investments. The main factors which influence this sensitivity are: (i) Time to maturity of the bond (ii) Coupon rate of the bond. Liquidity Risk- Liquidity risk arises when an individual, business or a financial institution is unable to repay its short term debts. The reason for failure to meet such obligations can be the inability to liquidate assets. This can be because of unavailability of interested buyers in the market or due to other market inefficiencies. By not being able to liquidate the assets, the defaulter is left with no funds to repay the debt. So by practicing Deposit- Advances management, banks and other such institution can protect them self from these risks. It also helps them to manage the risk in a better way.

Purpose of Deposit- Advances Management

The objective of deposit- advances management is to measure, analyze and monitor the risk involved, suitable strategies are prepared which helps banks in better management, not only banks, but also institutions like finance companies, leasing companies and Insurance companies are also benefited. Deposit- Advances management is a very crucial step for banks are looking at long crucial step for banks are looking at long term static planning. This will also be useful even in the medium term.

The basic aim of Deposit- Advances management is to properly use funds in order to benefit from profitable loan opportunities. This involves activities like purchasing money through cumulative deposit, federal funds and commercial papers. Whenever there are fluctuations in Interest rate. There is a risk of recession in the economy. The bank needs to keep a continuous check on both its deposits as well as advances. This highlights the importance of banking management.

2 REVIEW OF LITERATURE

Fase and Abma (2002)[1] in their research work claimed that the growth of the financial system could have a positive consequence on economic growth of a country. Bankers are concerned with six main types of risk. These are credit risk, liquidity risk, market risk, interest rate risk, earnings risk and solvency risk that can be grouped as credit risk, market risk and operational risk. Rose (2002, p. 115, 165) [2] explained credit risk in a very different way, he predicted the possibility of some bank's assets, especially its loans, will decline in value and perhaps become worthless. Chawla (1987)[3] believed that the nationalization of commercial banks helped the development of banking services through vigorous branch expansion programme. Deposit mobilization had shown great progress, banking habits of the people showed remarkable change, marked increase was noted in depositor's accounts, especially in rural area. Thomas, E.M. (2002)[4] in his paper, tried to analyze Credit – Deposit position of Public Sector Banks in Kerala from 1969-2000. He found that the CD ratio of Public Sector Banks in Kerala was much lower than the all India average. The main factors responsible for low CD ratio were Infra-structure deficiency, labour problems, lack of a

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favourable investment climate, lack of adequate number of bankable schemes, higher level of NPAs, lack of interest on the part of banks to open branches in rural areas, closure of many SSI units, and limited scope for large scale industries in the state. Mittal and Dhade (2007)[5] argue that with rapid changes in financial goals of commercial Banks, evaluating their financial performance is of utmost importance. A study of capital adequacy ratios such as Cash Deposit and Credit Deposit ratio would help the policy makers to create policies for enhancing the financial position of these intuitions. There have been several other studies that measured the relationship between banks assets and credit extension. Singh and Tandon (2012)[6] mentioned that public sector commercial banks are the most important and key lenders in Indian economy due to their shrewd network and big size which help them in mobilizing deposit. They control 80 percent of banking business in India.

3 OBJECTIVES OF THE STUDY

The following are the objectives of the study:

- i. To evaluate the Credit - Deposit ratio of both HDFC Bank and IDBI Bank in order to ascertain the Deposit – Lending pattern of both the banks during the study period (2007-2016).
- ii. To study the overall lending pattern of both HDFC Bank and IDBI Bank.

Hypotheses of the Study

In view of the above objectives of the study, the following hypotheses are framed-

H₀. There is no significant difference in the Credit - Deposit ratio of both HDFC Bank and IDBI Bank in order to ascertain the Deposit – Lending pattern of both the banks during the study period (2007-2016).

Methodology

The present research work is majorly based on secondary data. The secondary data has been collected from the annual reports published by both HDFC Bank and IDBI Bank, Reserve Bank of India's periodic bulletins and publications of the Indian Banks association. Statistical techniques like percentage, averages, coefficient of variation, Paired sample t-test will be applied.

Period of the Study

The present research work covers a period of ten years from 2007 to 2016. The period of the study has special importance as it incorporates the time period when the banking sector across the globe witnessed financial crises which resulted in a global economic downturn. Total Advance to Total Deposits (Loan to Deposit) Ratio-Credit Deposit Ratio which is also known as advance to deposit ratio of a bank shows the total amount of credit extended to its customers/ borrowers out of the total deposits it has received. Advance to deposit ratio is used to access an organization's liquidity. It is achieved by dividing banks total loans by its total deposits. This ratio is expressed in percentage form. To calculate Advance to deposit ratio the loans granted by banks and the amount of deposits received by it should be during the same specific period of

time. There are various factors that affect the ratio, such as low interest rates RBI which makes consumers take out loans. As an example, Advance to deposit ratio of US commercial banks was reduced to 77% from 100% in 2015, after years of low interest and global financial crisis. Ideal Advance to deposit ratio is believed to be between 80% to 90%, according to tradition and prudence, but it depends upon banks business model. If the ratio is 100, it implies self-reliance of banks on their own deposits to make loans to its customers. Whereas, if the ratio is greater than 100, bank borrowed money in order to advance at higher rates. A very high ratio means a bank does not have enough liquidity to cover its further financial obligations or uncertain funding requirements. Advance to deposit ratio is used to determine a bank's health, but its importance is reduced due to diversity of financing sources, other than equity or deposits.

$$\text{Credit Deposit Ratio} = \frac{\text{Total Advances}}{\text{Total Deposits}} * 100$$

Table: - 1 Statement Showing Credit Deposit Ratio of IDBI Bank

Year	Advances (Rs. In Millions)	Deposit (Rs. In Millions)	Credit Deposit Ratio %
2006-07	624,708.23	433,540.41	144.09
2007-08	822,126.89	729,979.85	112.62
2008-09	1,045,749.42	1,123,292.32	93.1
2009-10	1,405,089.37	1,675,874.48	83.84
2010-11	1,570,980.66	1,804,443.18	87.06
2011-12	1,811,584.33	2,102,441.69	86.17
2012-13	1,963,064.48	2,268,899.79	86.52
2013-14	1,976,860.04	2,355,728.42	83.92
2014-15	2,083,768.67	2,595,229.53	80.29
2015-16	2,158,934.49	2,650,873.93	81.44
Mean	1,546,286.66	1,774,030.36	93.91
Standard Deviation	551,614.05	778,554.17	19.92
COV %	35.67	43.89	21.22
Growth %	245.59	511.45	-43.48
Average Annual Growth %	24.56	51.14	-4.35

Source: Compiled from the annual reports of IDBI Bank (From 2007 - 2016) and researchers own calculations.

Interpretation

Table no.1, represents Advances and deposits of IDBI Bank (in millions) of 10 years. In the year 2006-07, Advances were 624,708.23 million while deposits were 433,540.41

million. The Credit Deposit ratio in the same year was calculated as 144.09. The following year Advances were 822,126.89 million and deposits were 729,979.85 million. Credit Deposit ratio was 112.62. In the year 2008-09, IDBI Bank's deposits were 1,123,292.32 with Credit Deposit ratio of 93.1. The consecutive year witnessed Advances as 1,405,089.37 million and deposits as 1,675,874.48 million with Credit Deposit ratio as 83.84. In 2010-11, Advances were 1,570,980.66 million and deposits were 1,804,443.18 million. Credit deposit ratio was 87.06. During the year 2011-12, Advances were 1,811,584.33 million and deposits were 2,102,441.69 million with Credit Deposit Ratio of 86.17. The year 2012-13 same Advances worth 1,963,064.48 million and Deposits worth 2,268,899.79 million with Credit Deposit ratio 86.52. In the year 2013-14, Advances were calculated as 1,976,860.04 million while Deposits were 2,355,728.42 million. Credit Deposit ratio in the same year was 83.92. In the consecutive year, Advances were 2,083,768.67 million and Deposit Ratio 80.29. The year 2015-16, Advances were calculated as 2,158,934.49 million and Deposits were 2,650,873.93 million. Credit Deposit ratio was 81.44 in the same year. IDBI Bank's average of Advances was recorded as 1,546,286.66 and Deposits was 1,774,030.36 Credit Deposit ratio's average for the study period was 93.91. Further, it is noted the Standard Deviation of Advances was 551,614.05 and that of Deposits was 778,554.17 with Credit Deposit ratio's as 19.92. The Coefficient of variation of Advances is 35.67% and that of Deposits were 43.89% with credit deposit's ratios as 21.22%. It is evident that the growth percentage of Advances is 245.59% and that of Deposits is 511.45%. Credit Deposit ratio's growth percentage is -43.48%. IDBI Bank's and Deposits is 51.14%. The annual growth rate of Credit Deposit ratio is -4.35%.

Table: - 2 Statement Showing Credit Deposit Ratio of HDFC Bank

Year	Advances (Rs. In Millions)	Deposit (Rs. In Millions)	Credit Deposit Ratio %
2006-07	469,447.80	682,642.70	68.77
2007-08	634,269.00	1,006,313.80	63.03
2008-09	990,273.73	1,426,447.97	69.42
2009-10	1,261,627.35	1,672,977.83	75.41
2010-11	1,608,314.16	2,082,872.14	77.22
2011-12	1,988,375.30	2,465,395.77	80.65
2012-13	2,472,451.15	2,960,917.70	83.5
2013-14	3,154,188.60	3,670,803.32	85.93
2014-15	3,834,079.72	4,502,836.48	85.15
2015-16	4,872,904.17	5,458,732.89	89.27
Mean	2,128,593.10	2,592,994.06	77.83

Standard Deviation	1,450,422.61	1,556,625.97	8.62
COV %	68.14	60.03	11.07
Growth %	938.01	699.65	29.81
Average Annual Growth %	93.80	69.96	2.98

Source: Compiled from the annual reports of HDFC Bank (From 2007 - 2016) and researchers own calculations.

Interpretation

Table no.2, represents Advances Deposits and Credit Deposit ratio of HDFC Bank during the period of 10 years. In the year 2006-07, Advances were 469,447.80 million, while deposits were 682,642.70 million with 68.77 credit Deposit ratio. During the next year, Advances and Deposits were 634,269.00 million and 1,006,313.80 million respectively. The credit deposit ratio was 63.03. In the next year, Advances were calculated as 990,273.73 million and deposits as 1,426,447.97 while credit deposit ratio was 69.42. In the year 2009-10, Advances were 1,261,627.35 million, while deposits were 1,672,977.83 million and Credit deposit ratio was 75.41. The next year witnessed Advances as 1,608,314.16 million and deposits as 2,082,872.14 million with a credit deposit ratio 77.22. In the year 2011-12, Advances were 1,988,375.30 million and deposits were 2,465,395.77 million. The credit deposit ratio for the same year was 80.65. In the following year, Advance were Calculated as 2,472,451.15 million, while deposits as 2,960,917.70 million with a Credit Deposit ratio 83.5. During the next year, Advances were 3,154,188.60 million and deposits were 3,670,803.32 million and Credit deposit ratio was 85.93. In the consecutive year, Advances and Deposits were 3,834,079.72 million and 4,502,836.48 million respectively. The Credit Deposit ratio was 85.15. In the year 2015-16, Advances and deposits were 4,872,904.17 million and 5,458,732.89 million, respectively, while the Credit Deposit ratio was 89.27. The average of Advances and Deposits was calculated as 2,128,593.10 and 2,592,994.06 million, while that of the Credit Deposit ratio was 77.83. The Standard Deviations of Advances were calculated as 1,450,422.61 while that of Deposits was calculated as 1,556,625.97 with Credit Deposit ratio's as 8.62. The Coefficient of variation in percentage of Advances and deposits were 68.14% and 60.03% respectively, while that of the Credit deposit ratio was 11.07%. The growth percentage of Advance and deposits were calculated as 938.01% and 699.65%. Growth percentage of the Credit Deposit ratio was 29.81%. The Annual growth rate was recorded as Advances 93.80% and Deposits 69.96%. The Annual Average growth rate of Credit Deposit ratio was 2.98%.

2. Cash Deposit Ratio-

Cash Deposits ratio indicates the lending ability of a bank from the mobilization of the deposits. Cash Deposit ratio provides assurance to the customers that the bank is having sufficient funds and they can withdraw their deposit from bank whenever they want. Cash Deposits ratio means

the amount of money a bank lends out the deposits it has collected. According to RBI, Cash Deposits ratio of scheduled commercial banks is the ratio of cash in hand and balances with RBI as percentage of aggregate deposits, cash reserve ratio is said to be the percentage amount which banks have to keep with RBI, while cash deposit ratio is the percentage amount which banks keep with them so that the customers can be paid as demanded by them. The bank's main activity is lending, and Cash Deposits ratio indicates how much banks core funds are being used for lending. As RBI says, Cash Deposits ratio should be 60%, which means for every Rs.100 deposits, Rs. 60 should be extended by banks as loan or credit. It is usually 75% of total deposits. Since, cash holding is very expensive, banks try to maintain minimum holding. Cash Deposits ratio provides assurance to the customers that the banks have sufficient funds to pay them back whenever they want to withdraw the same.

$$\text{Cash Deposit Ratio} = \frac{\text{Cash in Hand and Balances with RBI}}{\text{Total Deposits}} \times 100$$

Table: - 3 Statement Showing Cash- Deposit Ratio of IDBI Bank

Year	Cash (Rs. In Millions)	Deposit (Rs. In Millions)	Cash-Deposit Ratio %
2006-07	69,110.90	433,540.41	15.94
2007-08	87,587.72	729,979.85	12
2008-09	114,315.25	1,123,292.32	10.18
2009-10	147,538.17	1,675,874.48	8.8
2010-11	209,169.77	1,804,443.18	11.59
2011-12	180,520.35	2,102,441.69	8.59
2012-13	179,597.74	2,268,899.79	7.92
2013-14	168,488.43	2,355,728.42	7.15
2014-15	146,426.73	2,595,229.53	5.64
2015-16	162,879.86	2,650,873.93	6.14
Mean	146,563.5	1,774,030.4	9.4
Standard Deviation	44,006.0	778,554.2	3.1
COV %	30.0	43.9	33.3
Growth %	135.7	511.5	-61.5
Average Annual Growth %	13.6	51.1	-6.2

Source: Compiled from the annual reports of IDBI Bank(From 2007 - 2016) and researchers own calculations.

Interpretation

Table 3, clearly states cash and deposits of IDBI Bank during 2006 to 2016. In the first year, cash was 69,110.90 million while deposits were 433,540.41 million, with Cash Deposit ratio 15.94. In the year 2007-08, cash was calculated as 87,587.72 million while deposits were 729,979.85 million with Cash Deposit Ratio of 12. In the consecutive year, Cash was 114,315.25 million and Deposit 1,123,292.32 million with Cash deposit ratio 10.18. In the year 2009-10, Cash was 147,538.17 million and deposits were 1,675,874.48 million. Cash deposit ratio was 8.8. 2010-11 witnessed 209,169.77 million Cash and 1,804,443.18 million deposits with Cash deposit ratio of 11.59. In the year 2011-12, IDBI Bank's Cash was 180,520.35 million and deposits were 2,102,441.69 with Cash deposit ratio 8.59. The year 2012-13 saw cash as 179,597.74 million while deposits as 2,268,899.79 million, cash deposit ratio was recorded as 7.92. In the next year, cash in IDBI Bank was calculated as 168,488.43 million and deposits as 2,355,728.42 million with Cash deposit ratio 7.15. In the next year, cash was 146,426.73 million in contrast to deposits which were 2,595,229.53 million with Cash Deposit ratio of 5.64. In the year 2015-16, cash was 162,879.86 million and Deposits were 2,650,873.93 million. Cash deposit ratio was 6.14 in the same year. The arithmetic mean of cash was calculated as 146,563.3 while that of Deposits were 1,774,030.4. The mean of cash Deposit ratio was 9.4 The Standard Deviation of Cash was 44,006.0 and that of Deposits was 778,554.2. Standard Deviation of Cash deposit ratio was calculated as 3.1. It is noted that the coefficient of Variation percentage of Cash was 30% while of deposits were 43.9% and that of Cash Deposit ratio was 33.3%. Growth percentage of Cash was calculated as 135.7% and that of Deposits were calculated as 511.5%. Growth percentage of Cash deposit ratio was -61.5%. The Calculation of Annual Growth percentage results in the annual growth percentage of cash as 13.6% and Deposits as 51.1%, while that of Cash Deposit ratio was -6.2%.

Table: - 4 Statement Showing Cash- Deposit Ratio of HDFC Bank

Year	Cash (Rs. In Millions)	Deposit (Rs. In Millions)	Cash Deposit Ratio %
2006-07	90,734.30	682,642.70	13.29
2007-08	148,279.80	1,006,313.80	14.73
2008-09	175,371.54	1,426,447.97	12.29
2009-10	300,781.94	1,672,977.83	17.98
2010-11	298,382.78	2,082,872.14	10.17
2011-12	211,751.62	2,465,395.77	8.59
2012-13	275,311.64	2,960,917.70	9.3
2013-14	399,134.28	3,670,803.32	10.87
2014-15	365,264.21	4,502,836.48	8.11
2015-16	390,688.82	5,458,732.89	7.16

Mean	265,570.09	2,592,994.06	11.25
Standard Deviation	106,040.47	1,556,625.97	3.36
COV %	39.93	60.03	29.85
Growth %	330.59	699.65	-46.15
Average Annual Growth %	33.06	69.96	-4.62

Source: Compiled from the annual reports of HDFC Bank (From 2007 - 2016) and researchers own calculations.

Interpretation

Table 4, represents cash and deposits of HDFC Bank with the cash deposit ratio for ten years. During 2006-07, cash was 90,734.30 million, while Deposits were 682,642.70 million with a cash deposit ratio as 13.29. In the next year, cash and deposits were 148,279.80 million 1,006,313.80 million respectively. The Cash Deposit ratio was 14.73. Further, in the year 2008-09, cash and Deposits were calculated as 175,371.54 million and 1,426,447.97 million and Cash Deposit Ratio (CDR) was 12.29. In the next year, cash and deposits were calculated as 300,781.94 million and 1,672,977.83 million, respectively while CDR was 17.98. In the year 2010-11, cash was 298,382.78 million and Deposits were 2,082,872.14 million with CDR 10.17. Further, it is noted that in the consecutive year, cash and Deposits were calculated as 211,751.62 million and 2,465,395.77 million respectively with CDR as 8.59. In the year 2012-13, Cash was 275,311.64 million and Deposits were 2,960,917.70 million while CDR was 9.3. In the year 2013-14, cash in HDFC Bank was calculated at 399,134.28 million, while Deposits as 3,670,803.32 million and CDR was 10.87. During the next year, Cash and the Deposits were 365,264.21 million and 4,502,836.48 million were the Deposits with CDR 8.11. During the following year cash and Deposits were 390,688.82 million and Deposits were 5,458,732.89 million. Also CDR for the same year was 7.16. The arithmetic mean of Cash was calculated as 265,570.09 while that of Deposits as 2,592,994.06. The Mean of Credit Deposit ratio was 11.25. The Standard deviations of Cash and Deposits were 106,040.47 and 1,556,625.97 while that of CDR was 3.36. Coefficient of Variation in percentage of Cash was 39.93% and of Deposits was 60.03%. Coefficient of variation of CDR was 29.85%. Growth percentage of Cash and Deposits were 330.59% and 699.65% and that of CDR was -46.15%. The Average Annual growth rate of Cash and Deposits of HDFC Bank was 33.06% and 69.96%. The annual growth rate of CDR was -4.62%.

3. Investment Deposit Ratio-

It is the absolute growth in credit in relation to the absolute growth in deposits. Total investment includes all the investment that is done by the bank in the financial year, which includes all the long term and short term investments such as advances, loans, etc., while total deposits are the deposit raised by the banks current accounts, saving

accounts, recurring deposit accounts and fixed deposit accounts. The investment deposit ratio is achieved by dividing the total investments by total deposits.

$$\text{Investment Deposit Ratio} = \frac{\text{Investments}}{\text{Total Deposits}} * 100$$

Table: - 5 Statement Showing Investment- Deposit Ratio of IDBI Bank

Year	Investments (Rs. In Millions)	Deposit (Rs. In Millions)	Investment Deposit Ratio %
2006-07	256,753.12	433,540.41	59.22
2007-08	330,643.71	729,979.85	45.29
2008-09	501,610.56	1,123,292.32	44.66
2009-10	731,065.16	1,675,874.48	43.62
2010-11	680,339.02	1,804,443.18	37.7
2011-12	828,292.76	2,102,441.69	39.4
2012-13	984,329.09	2,268,899.79	43.38
2013-14	1,034,190.95	2,355,728.42	43.9
2014-15	973,469.26	2,595,229.53	37.51
2015-16	988,124.60	2,650,873.93	37.28
Mean	730,881.82	1,774,030.36	43.2
Standard Deviation	284,966.24	778,554.17	6.46
COV %	38.99	43.89	14.96
Growth %	284.85	511.45	-37.06
Average Annual Growth %	28.49	51.14	-3.71

Source: Compiled from the annual reports of IDBI Bank (From 2007 - 2016) and researchers own calculations.

Interpretations

Table 5, represents Investments and Deposits of IDBI Bank with Investment Deposit ratio for the ten years. In the year 2006-07, Investments were 256,753.72 million, while Deposits were 433,540.41 million and Investment Deposit ratio (IDR) was 59.22. During the following year, Investments were 330,643.71 million and Deposits were 729,979.85 million with IDR 45.29. In the year 2008-09, Investments were calculated as 501,610.56 million and 1,123,292.32 million and IDR was 44.66. In the year 2009-10, Investments were 731,065.16 million and Deposits were 1,675,874.48 million with IDR 43.62. During the next year, Investments were 680,339.02 million, while Deposit was 1,804,443.18 and IDR was 37.7. In the following year,

Investment and Deposits were calculated as 828,292.76 million and 2,102,441.69 million and IDR was 39.4. In the year 2012-13, Investments of IDBI Bank were 984,329.09 and Deposit 2,268,899.79 million with IDR 43.38. In the next year, Investments were 1,034,190.95 million and Deposits were 2,355,728.42 million and Investments Deposit ratio was 43.9. In the year 2014-15, Investments were 973,469.26 million and Deposits were 2,595,229.53 million and Investment Deposit ratio was 37.5%. In the year 2015-16, Investments were 988,124.60 and deposits were 2,650,837.93 and Investment Deposit ratio was 37.28. The arithmetic mean of Investment and Deposit were 730,881.82 and 1,774,030.36 and that of Investment Deposit ratio was 43.2. The standard deviation of Investment Deposit ratios was 6.46. The coefficient of variation in percentage of Investments was 38.99% and that of Deposits was 43.89% and IDR's coefficient of variation was 14.96%. Growth of Investments of IDBI Bank was recorded as 284.85% and that of Deposit were recorded as 511.45%. Investment Deposit ratio's growth was -37.06%. The average annual growth rate of Investments was 28.49% and of Deposits was 51.14%. Investment Deposit ratio's annual growth was -3.71%.

Table: - 6 Statement Showing Investment- Deposit Ratio of HDFC Bank

Year	Investments (Rs. In Millions)	Deposit (Rs. In Millions)	Investment Deposit Ratio %
2006-07	305,670.40	682,642.70	44.78
2007-08	492,880.10	1,006,313.80	48.98
2008-09	587,151.46	1,426,447.97	41.16
2009-10	585,082.76	1,672,977.83	34.97
2010-11	702,766.67	2,082,872.14	33.74
2011-12	967,951.09	2,465,395.77	39.26
2012-13	1,109,604.12	2,960,917.70	37.48
2013-14	1,195,710.63	3,670,803.32	32.57
2014-15	1,494,544.16	4,502,836.48	33.19
2015-16	1,616,833.40	5,458,732.89	29.62
Mean	905,819.48	2,592,994.06	37.58
Standard Deviation	441,954.32	1,556,625.97	6.02
COV %	48.79	60.03	16.03
Growth %	428.95	699.65	-33.85
Average Annual Growth %	42.89	69.96	-3.39

Source: Compiled from the annual reports of HDFC Bank (From 2007 - 2016) and researchers own calculations.

Interpretation

Table 6, represents Investments and Deposits of HDFC Bank with the respective Investment Deposit ratio. In the year 2006-07 Investments were 305, 670, 40 million and Deposits were 682,642.70 million with Investment Deposit ratio 44.78. In the year 2007-08, Investments and Deposits were calculated as 492,880.10 million and 1,006,313.80 million with Investment Deposit ratio 48.98. During 2008-09, Investment Deposit Ratio was 41.16. In the year 2009-10, Investments were 585,082.76 million and deposits were 1,672,977.83 million, while the Investment deposit ratio (IDR) was 34.97. During the next year, Investments were 702,766.67 million and Deposits were 2,082,872.14 million with IDR 33.74. In the year 2011-12, Investments and Deposits of HDFC Bank were calculated at 967,951.09 million and 2,465,395.77 million, while IDR was 39.26. In the year 2012-13, Investment and Deposit were 1,109,604.12 million and 2,960,917.70 million with an IDR of 37.48. In the year 2013-14, Investments were 1,195,710.63 million and Deposits were 3,670,803.32 million, while IDR was 32.57. During the consecutive year, Investment and Deposits were 1,494,544.16 million and 4,502,836.48 million with an IDR 33.19. In the year 2015-16, Investments of HDFC Bank were 1,616,833.40 million while Deposits were 5,458,732.89 million with IDR 29.62.

TESTING OF HYPOTHESES

Null Hypothesis (H₀)-

H₀₁: There is no significant difference in the Credit - Deposit ratio of both HDFC Bank and IDBI Bank in order to ascertain the Deposit – Lending pattern of both the banks during the study period (2007-2016).

		Mean	N	Std. Deviation	Std. Error Mean
Pair 1	Credit Deposit Ratio-IDBI Bank	93.91	10	19.92	6.30
	Credit Deposit Ratio-HDFC Bank	77.84	10	8.62	2.72

		N	Correlation	Sig.
Pair 1	Credit Deposit Ratio-IDBI Bank & Credit Deposit Ratio-HDFC Bank	10	-.701	.024

		Paired Differences				t	df	Sig. (2-tailed)
Mean	Std. Dev.	Std. Error Mean	95% Confidence Interval of the Difference					

				Lower	Upper			
Pair 1	16.07	26.68	8.44	-3.02	35.16	1.91	9	.089

Interpretation of t-test
 $t=1.91$ & $t_{0.05}=2.262$
 $t < t_{0.05}$

When degree of freedom (df) is 9 and level of significance is 5%, the critical value is 2.262. Since the calculated value of t is 1.91 which less than the table value, it is concluded that there is no significant difference in the Credit - Deposit ratio of both HDFC Bank and IDBI Bank in order to ascertain the Deposit – Lending pattern of both the banks during the study period (2007-2016). Hence, null hypothesis is accepted.

4 CONCLUSION

In the study it was found and observed that the Credit Deposit Ratio of IDBI Bank was highest in the year 2006-07

when it was 144.09% and was lowest in the year 2014-15 when it was 80.29%. The average Credit Deposit Ratio of IDBI Bank during the study period was 93.91%, which was slightly higher than the standard norms of 80%-90% showing that the firm does not have sufficient liquidity to cover its other financial obligations. As compared to IDBI Bank, the Credit Deposit Ratio of HDFC bank was slightly low throughout the study period. The highest Credit Deposit ratio was in the year 2015-16, when it was 89.27% and the lowest ratio was 63.03% in the year 2007-08. The average Credit Deposit Ratio of HDFC Bank was 77.83%, which showed a better position as compared to IDBI Bank. A very high ratio means that IDBI bank does not have enough liquidity to cover its future financial obligations or uncertain funding requirements; this has negative impact on the overall business of IDBI Bank. On comparing Cash Deposit Ratio of both the banks, it was observed that IDBI Bank had its highest ratio in the year 2006-07 when it was 15.94%, while it observed its lowest cash deposit composition in the year 2014-15 when it was 5.64% and the average cash deposit ratio of IDBI Bank was 9.4%, during the study period. HDFC Bank's cash deposit ratio was slightly higher as compared to IDBI Bank throughout the study period. It recorded its highest cash deposit ratio in the year 2009-10, when it was 17.98%, while the lowest Cash Deposit ratio was recorded in the year 2015-16, when it was 7.16%. The bank had an average ratio of 11.25% during the study period. Showing that the customers of HDFC Bank were having more confidence than the customers of IDBI Bank, since the ratio provides assurance to the customers that the banks has sufficient funds to pay them back whenever they want to withdraw the same, this has positive impact on the overall business of HDFC Bank.

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