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ASSET LIABILITY MANAGEMENT: A CASE OF TOP 7 PUBLIC SECTOR BANKS IN INDIA

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ABSTRACT

Asset Liability Management is one of the important process and the significant function through which the banks manage their balance sheet effectively. This helps the banks in mitigating their exposure to liquidity risk, interest rate risk, market risk, etc. and maximize the profitability of the bank. The job of ALM is carried out prudently by the ALCO of banks'. The significance of ALM increased with the deregulation of interest rates, increasing competition in the financial markets and the volatility in interest rates in the market. The present study is to analyse asset liability mismatches, emphasize how the Net Interest Income of top 7 public sector banks is impacted with interest rate changes and how the banks can manage their interest rate risk with the help of Gap Analysis. The study also includes sensitivity analysis for interest rate changes.

Keywords: Asset Liability Management, Gap Analysis, Interest rate risk, Net Interest Income.

INTRODUCTION

Asset Liability management is the process by which an institution manages its balance sheet to meet changes in the interest rate and mismatches in liquidity scenarios. Banks and other financial institutions, irrespective of size, provide services that expose them to a variety of risks which including credit risk, interest risk, and liquidity risk. Failure to identify the risk may have an impact on the financial institution's liquidity position. Asset Liability Management (ALM) is a risk management strategy for assessing such risk by making an attempt to analyse the gap between assets and liabilities in terms of their maturities and interest rate sensitivities in order to minimize the risk arising for banks from such a gap, primarily interest rate risk and liquidity risk. The Reserve Bank of India (RBI) has implemented the Basel III norms for Indian bank regulation, providing a framework for banks to develop ALM policies. At the macro-level, ALM leads to the formulation of critical business policies, the efficient allocation of capital, and the design of products with appropriate pricing strategies, whereas at the micro-level, ALM has two goals: profitability through price matching and liquidity through maturity matching. An effective asset-liability management system seeks to manage the volume, mix, maturity, rate sensitivity, quality, and liquidity of all assets and liabilities in order to achieve a predetermined, acceptable risk/reward ratio. ALM encompasses not only balance-sheet assets and liabilities such as deposits and lending, but also off-balance-sheet activities such as swaps, futures, and options.

NEED OF THE STUDY

Asset Liability Management (ALM) is a risk management mechanism used by banks to address the risk of a mismatch between assets and liabilities caused by liquidity or interest rate changes. The ability of an institution to meet its liabilities by borrowing or converting assets is referred to as liquidity. Aside from liquidity, the bank may experience a mismatch as a result of changes in interest rates, as banks typically borrow short term and lend long term. To reduce the risk of liquidity and interest rate exposures different techniques and strategies are used by banks. Gap Analysis is one among them.

OBJECTIVES OF THE STUDY:

- To calculate the Repricing Gap and Cumulative gaps between the assets and liabilities of select public sector banks.
- To study the trend in gaps of the select banks.
- To analyse Net interest income (NII) changes by conducting sensitivity analysis.

SCOPE OF THE STUDY:

Research is limited to computation and analysis of Repricing Gap, Cumulative gaps and Net interest income exposure of top 7 public sector banks in India for the last 3 years i.e., from financial year 2018-2021.

ABOUT ASSET LIABILITY MANAGEMENT:

Assets and Liabilities Management (ALM) is a dynamic process. Banks generally take deposits from customers and extend loans to clients. The loans and advances are the Assets in a Bank while Deposits of customers and other financial institutions and loans taken from other banks and financial institutions are the liabilities in a bank. All transactions of the banks revolve around raising and deploying the funds. ALM is the management of loans and advances and deposits of a bank. The primary responsibility of ALCO is to ensure proper Asset Liability mixes, volumes, maturities, yields and costs in order to achieve a specified Net Interest Income.

The concept of asset/liability management focuses on the cash flows and its timing as the banks must plan for their payments of liabilities. ALM has gained more importance as an initiative for risk management practices by our Indian banks. It can be said that asset-liability management in banks basically happens at 2 levels – micro level and macro level. At the macro-level, broad guidelines for the proper management of assets and liabilities will be ggivenby the ALCO which involves senior management of the bank. These guidelines will help in day-to-day decisions on making within the acceptable level/tolerance level of risks. At the micro-level, business managers will monitor the risk management as per the macro ALM guidelines.

ASSET LIABILITY MANAGEMENT COMMITTEE (ALCO)

ALCO is a supervisory committee comprising of senior management including the chairman/CEO of the bank, head of the credit department, head of forex department, head of treasury department, head of funds department, head of research department, head of MIS department etc. The major role of ALCO is to manage

the assets and liabilities with an aim to earn adequate returns, and influence the net earnings which in turn results in the increase of stock prices of the bank. The policies, procedures and strategies of ALCO should always be aligned with the bank's board goals, objectives and risk tolerance lvels. The ALCO meetings are conducted at least once in a quarter. This is not mandatory and if required the ALCO can meet and take the decisions if they feel it would impact the bank's performance. The major responsibilities of the ALCO include management of market risk tolerance, ensuring adequate liquidity while maintaining the interest rate spread, reviewing the impact of the regulatory changes on bank, introducing new products and their impact on the bank's performance, etc.

The scope of ALM function includes Liquidity risk management, Management of market risks (including Interest Rate Risk), Funding and capital planning, Profit planning and growth projection, Trading risk management

Commercial banks must measure and manage their liquidity requirements. Liquidity management can lessen the likelihood of an undesirable situation emerging by ensuring a bank's ability to satisfy its liabilities when they become due. The necessity of liquidity extends beyond individual institutions, since a liquidity shortage in one can have implications throughout the system. Bank management should monitor not only the banks liquidity situations on a regular basis, but also how liquidity requirements are anticipated to change in the event of a crisis. Assets have shown to be valuable in the past. Government securities and other money market products, which are commonly thought to be liquid, can become illiquid when the market and players are unidirectional. As a result, liquidity must be monitored via maturities or cash flow mismatches. A maturity ladder and the calculation of cumulative surplus or deficit of funds at selected maturity dates are used as a common instrument for measuring and managing net funding requirements.

The time buckets given the Reserve Bank of India for distribution of assets and liabilities as per the maturity profiles is as under:

- 1 to 14 days
- 15 to 28 days
- 29 days and upto 3 months
- Over 3 months and upto 6 months
- Over 6 months and upto 12 months

- Over 1 year and upto 2 years
- Over 2 years and upto 5 years
- Over 5 years

Depending on cash inflows and withdrawals, there may be imbalances within each time bucket. The mismatches up to a year are important because they provide early warning signs of liquidity concerns for future. The short term mismatches in the maturity buckets of 1-14 days and 15-28 days should be focused more. The banks should also keep track of the cumulative mismatches in overall time buckets as per the set prudential norms by board/management decisions. In any kind of situation, the cash outflows during 1-14 days and 15-28 days should not exceed 20% of the total cash outflows in each time bucket.

If there is any necessity for a higher tolerance level of the bank's asset-liability profile, it could operate with a higher limit sanctioned by the Board of Directors or Management Committee with proper justifications for setting up higher limits of tolerance. A copy of the same should be sent to the Department of Banking Supervision of the Reserve Bank of India. The higher tolerance level set is intended to be used for temporary purposes until the bank stabilizes its asset-liability patterns.

REVIEW OF LITERATURE

Madhu Vij (2016) studied the usage of ALM for managing liquidity risk and interest rate risk of Citi bank, ICICI bank, IDBI bank and SBI.The study revealed that the process of ALM will differ from bank to bank and the success of the technique will depend upon how effectively the banks are able to forecast and manage the risk they carry and are exposed to.

Sheela P and Tejaswini Bastray (2015) compared the ALM practices of UBI and ICICI bank using gap analysis. The study revealed that interest rate risk is measured through the use of gap analysis. For filling the short-term liquidity gap, bank is resorting to market borrowing at high rate of interest which causes reduction in interest margin and the profitability of bank.

Amit Kumar Meena, Joydip Dhar (2014) in their study of asset-liability management in top three banks from each group of public, private, and foreign banks found that the liquidity structure of banks is stable but the cash maintained with them might create problem in the long run as it leads to profit reduction.

Mihir Dash & Ravi Pathak (2013) in their study on Asset Liability Management of twenty-seven public sector banks, fourteen private sector banks, and ten foreign banks found that ownership and structure of the banks have an impact on the bank's ALM procedure. They found that SBI and its Associates have the best asset-liability maturity pattern.

Dr. Kanhaiya Singh (2013) in their study which dealt with 5 years data of both public and private sector banks analysed the impact of measures and strategies banks undertake to manage asset-liability composition has impact on the performance and profitability.

Mihir Dash (2011) in the study has taken 20 private sector banks, 10 foreign banks and 26 public sector banks and has done the Gap analysis and cumulative gap analysis to know the liquidity position of banks. The results of the study suggest that the public sector banks had a better short-term liquidity position than the private sector banks and foreign banks.

Kajal Chaudhary and Monika Sharma (2011) in their study revealed that public banks must pay attention while selecting the borrowers and also should decrease the NPA level. The perspective of management also defines the risk profile of banks in few situations which further determines the liquidity and profitability trade-off.

RESEARCH METHODOLOGY

The data required for this study includes the maturity profiles of assets and liabilities of banks for the period of study i.e., last 3 years from 2018-2021. The data collected is from the secondary sources i.e., from the respective bank's annual report. The sample for the study includes top 7 public sector banks that are selected based on the bank's market capitalization. The banks include State Bank of India, Bank of Baroda, Central Bank of India, Punjab National Bank, Canara Bank, Bank of Maharashtra, and Bank of India.

Gap analysis is the widely accepted method by the banks and other financial institutions for measuring the exposure of interest rate risk. The tool used for conducting and interpreting Gap analysis in this study is MS Excel. The gaps (difference between the value of total rate sensitive assets and rate sensitive liabilities) and cumulative gaps (net summation of calculated gaps) for all the selected banks for 3 years are calculated with the help of Gap Analysis. The study also includes Sensitivity Analysis performed on one year data i.e., 2020-2021 to analyse the impact of interest rate changes on the Net Interest Income of the bank.

DATA ANALYSIS

The data collected for the study is analysed by conducting Gap Analysis. The gaps and cumulative gaps are calculated with the help of Excel. The maturity profile of Bank of Baroda for the year 2018-19 is as follows:

Bank of Baroda										
Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
Advances	18523.36	10111.87	7608.12	26607.86	28981.27	20905.57	25938.28	194884.5	50899.77	84358.17
Investments	153.72	1581.82	236.22	1405.67	4680.44	5225.05	7432.81	32851.1	26469.65	102261.6
Foreign Currency assets	43276.72	7471.07	6041.67	12468.4	27743.43	19231.42	13874.88	22665.46	20210.13	9438.9
Deposits	7995.1	20117.41	11969.02	17813.19	65081.82	64330.91	98994.46	183272.3	33701.91	135413.7
Borrowings	1573.24	14428.61	15700	0	3010.55	10488.65	8376.75	7361.2	6262.31	0
Foreign Currency liabilities	9189.86	24612.43	3696.62	10485.28	38754.33	32449.24	34881.8	29425.19	9827.41	1287.37

Source: Annual Report

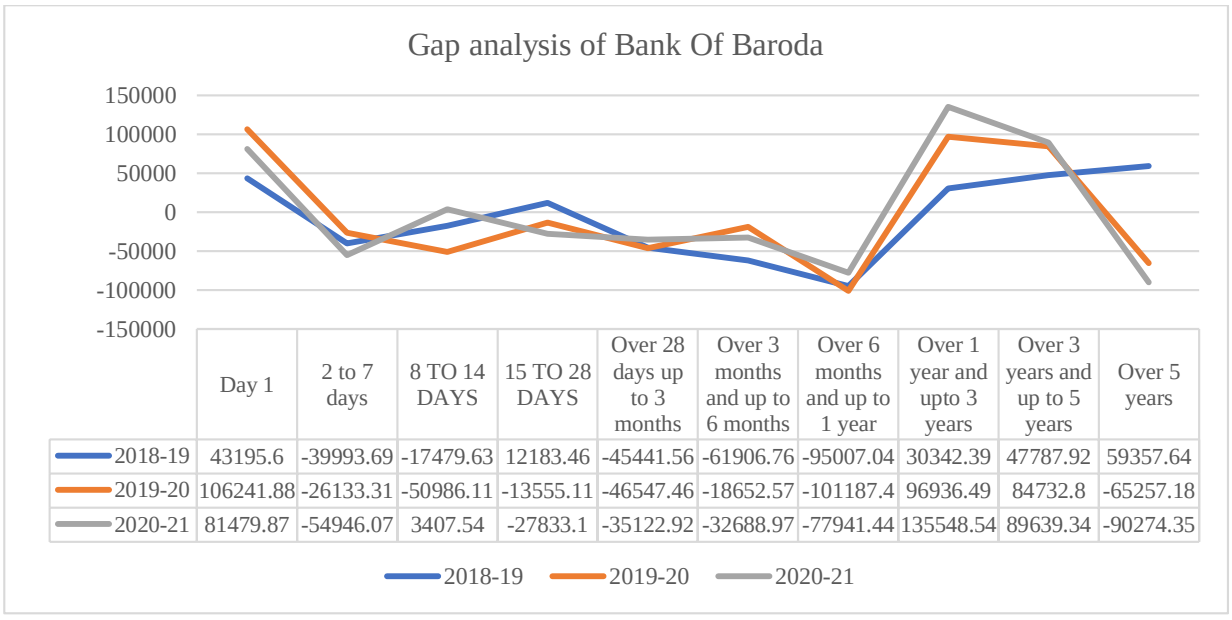
In the same manner the maturity profiles for all the three years 2018-19, 2019-20 and 2020-21 for 7 banks has been considered and the analysis is done.

The gap and cumulative gaps calculated for Bank of Baroda for all the three years is depicted in the below table. The gaps are calculated by subtracting the rate-sensitive liabilities from the rate-sensitive assets. The same calculations are done for all the seven banks considered for the study.

Details	Day 1	2-7 DAYS	8 - 14 DAYS	15-28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and up to 3 years	Over 3 years and up to 5 years	Over 5 years
Bank of Baroda 2018-19										
RSA	61953.8	19164.76	13886.01	40481.93	61405.14	45362.04	47245.97	250401	97579.55	196058.7
RSL	18758.2	59158.45	31365.64	28298.47	106846.7	107268.8	142253	220058.6	49791.63	136701
Gap	43195.6	-39993.7	-17479.6	12183.46	-45441.6	-61906.8	-95007	30342.39	47787.92	59357.64
C. Gap	43195.6	3201.91	-14277.7	-2094.26	-47535.8	-109443	-204450	-174107	-126319	-66961.7
Bank of Baroda 2019-20										

RSA	125931.7	12607.05	10000.77	21786.75	84954.31	66055.42	75529.33	399836.9	170997.9	214026.8
RSL	19689.79	38740.36	60986.88	35341.86	131501.8	84707.99	176716.7	302900.4	86265.06	279283.9
Gap	106241.9	-26133.3	-50986.1	-13555.1	-46547.5	-18652.6	-101187	96936.49	84732.8	-65257.2
C. Gap	106241.9	80108.57	29122.46	15567.35	-30980.1	-49632.7	-150820	-53883.5	30849.26	-34407.9
Bank of Baroda 2020-21										
RSA	105744	16554.37	30538.91	17581.96	52638.66	47235.85	61238.98	457833	170223.5	205200.9
RSL	24264.14	71500.44	27131.37	45415.06	87761.58	79924.82	139180.4	322284.5	80584.12	295475.2
GAP	81479.87	-54946.1	3407.54	-27833.1	-35122.9	-32689	-77941.4	135548.5	89639.34	-90274.4
Cum GAP	81479.87	26533.8	29941.34	2108.24	-33014.7	-65703.7	-143645	-8096.55	81542.79	-8731.56

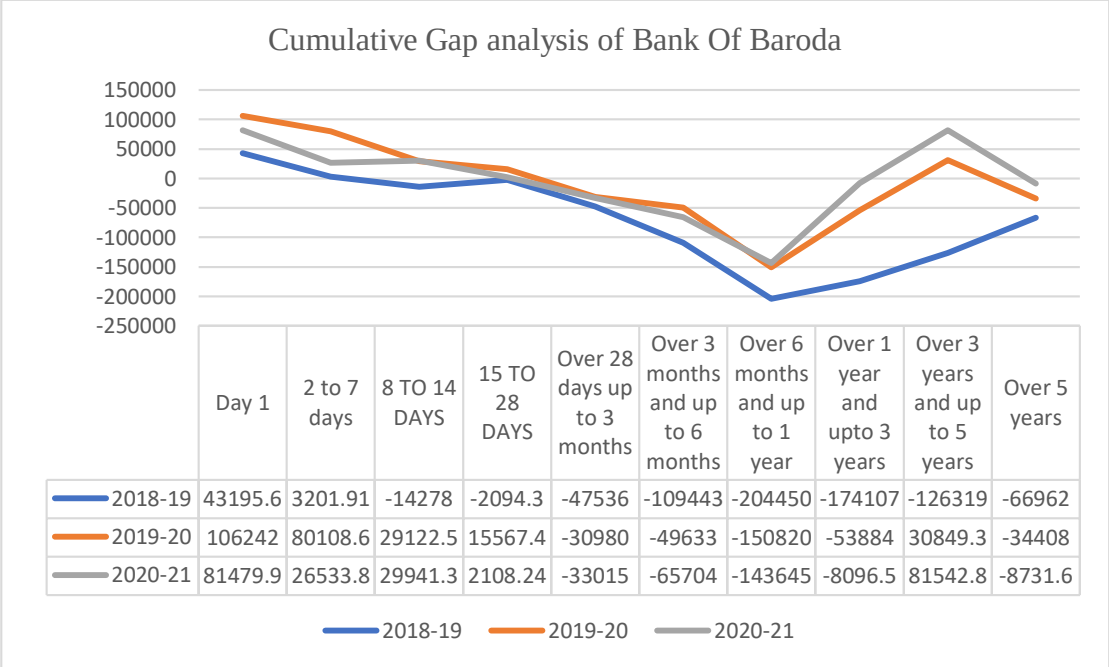
The interpretation of gap analysis is shown below with the help of charts for all the 7 banks for the time period considered in the study. The positive gap indicates that there are more of assets repricing than the liabilities whereas the negative gap indicates that the liabilities are repricing at a faster pace than the assets. The banks also adopt the strategies to maintain positive or negative gaps to cope up with interest fluctuations in the market at the respective time duration.



The bucket wise distributions of maturity gaps depict that in the year 2018 to 2019 the maturity buckets of 2 to 7 days, 8 to 14 days, over 28 days and upto 3months, over 3 months and upto 6 months, over 6 months and upto 1 year have negative gap.

From the year 2019-2020 maturity buckets of 2 to 7 days, 8 to 14 days, 15 to 28 days, over 28 days up to 3 months, over 3 months and up to 6 months, over 6 months and up to 1 year have negative gaps and the remaining buckets are depicting a positive gap.

From the year 2020-2021 the maturity buckets with negative gap are 2 to 7 days, 8 to 14 days, 15 to 28 days, over 28 days up to 3 months, over 3 months and up to 6 months, over 6 months and up to 1 year, over 1 year and up to 3 years, over 3 years and up to 5 years, over 5 years.

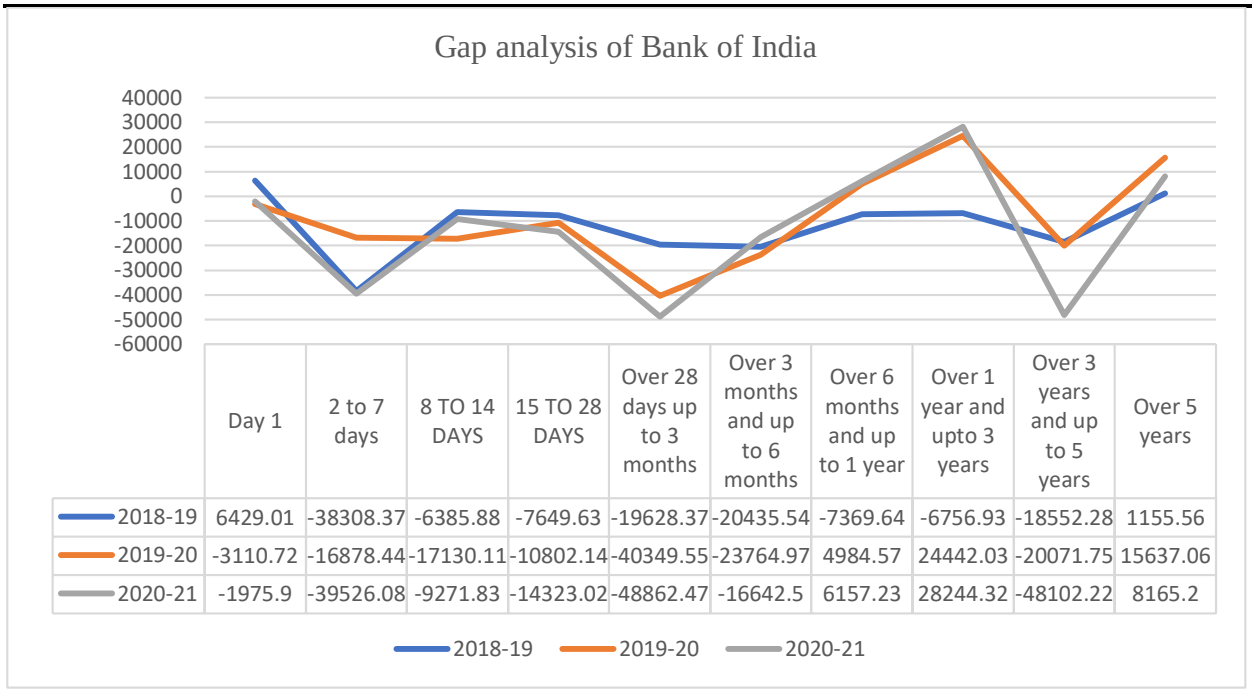


	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
2018-19	43195.6	3201.91	-14278	-2094.3	-47536	-109443	-204450	-174107	-126319	-66962
2019-20	106242	80108.6	29122.5	15567.4	-30980	-49633	-150820	-53884	30849.3	-34408
2020-21	81479.9	26533.8	29941.3	2108.24	-33015	-65704	-143645	-8096.5	81542.8	-8731.6

The cumulative gaps depict that in the year 2018-19 the maturity buckets of Day 1 and 2 to 7 days have positive gap and the remaining buckets have negative cumulative gap.

For the year 2019-2020 the cumulative gap is positive for the buckets day 1, 2 to 7 days, 8 to 14 days, 15 to 28 days and over 3 years up to 5 years.

From the year 2020-2021 the cumulative gap is positive for day 1, 2 to 7 days, 8 to 14 days, 15 to 28 days, over 3 years and up to 5 years' time buckets and the remaining buckets have negative cumulative gap.

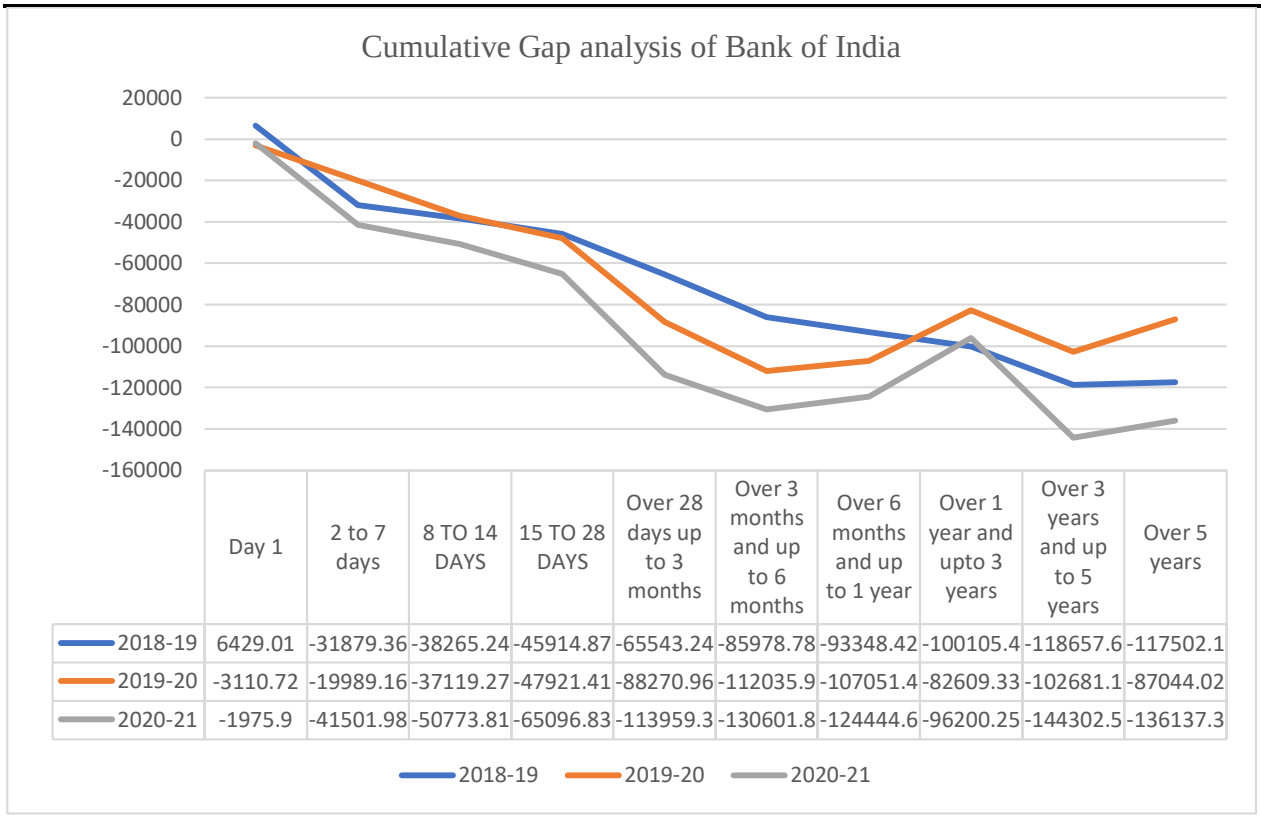


	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
2018-19	6429.01	-38308.37	-6385.88	-7649.63	-19628.37	-20435.54	-7369.64	-6756.93	-18552.28	1155.56
2019-20	-3110.72	-16878.44	-17130.11	-10802.14	-40349.55	-23764.97	4984.57	24442.03	-20071.75	15637.06
2020-21	-1975.9	-39526.08	-9271.83	-14323.02	-48862.47	-16642.5	6157.23	28244.32	-48102.22	8165.2

The bucket wise distributions of maturity gaps depict that in the year 2018 to 2019 the positive gap Day 1, over 5 years. The remaining figures of maturity buckets are in negative. The most affected positive and negative gaps are day 1 maturity bucket i.e., 6429.01 crores and over 28 days up to 3 months maturity bucket i.e., -19628.37.

From the year 2019-2020 the positive gap maturity buckets are as follows over 6 months and up to 1 year, over 1 year and up to 3 years, over 5 years. The remaining figures of maturity buckets are in negative. The most affected positive and negative gaps are over 1 year and up to 3 years maturity bucket i.e., 24442.03 and over 28 days up to 3 months maturity buckets i.e., -40349.55.

From the year 2020-2021 the positive gap maturity buckets are as follows over 6 months and up to 1 year, over 1 year and up to 3 years, over 5 years. The remaining figures of maturity buckets are in negative. The most affected positive and negative gaps are over 1 year and up to 3 years maturity bucket i.e., 28244.32 over 3 years and up to 5 years maturity buckets i.e., -48102.22

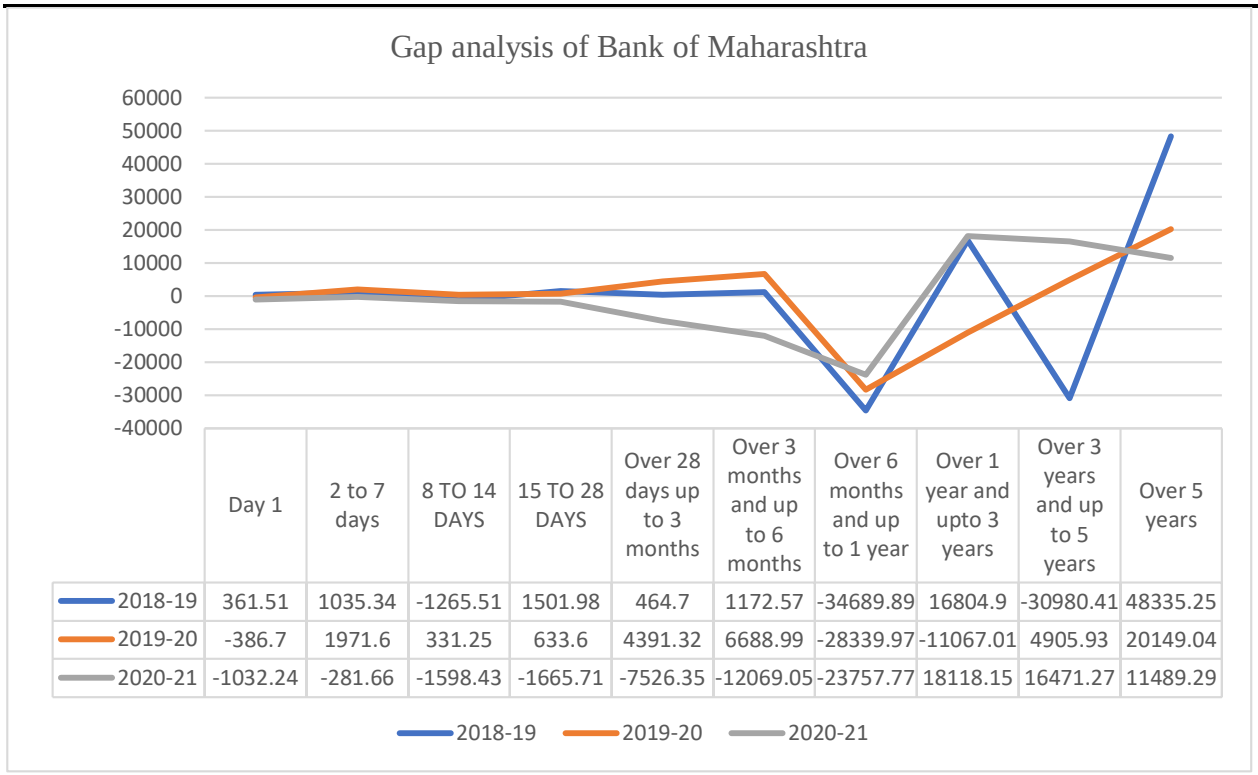


	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
2018-19	6429.01	-31879.36	-38265.24	-45914.87	-65543.24	-85978.78	-93348.42	-100105.4	-118657.6	-117502.1
2019-20	-3110.72	-19989.16	-37119.27	-47921.41	-88270.96	-112035.9	-107051.4	-82609.33	-102681.1	-87044.02
2020-21	-1975.9	-41501.98	-50773.81	-65096.83	-113959.3	-130601.8	-124444.6	-96200.25	-144302.5	-136137.3

The cumulative gap calculations helps in ascertaining the mismatches of asset-liability for long term than in the short-term time buckets. If we consider the time bucket of over 1 year and upto 3 years, we can observe that the cumulative gap is Rs. - 100105.4 cr. This means that if we want to understand the position of assets-liabilities maturity/repricing over a period of 1 year – 3 years, it shows that there are more of liabilities repricing or maturing than assets and hence the bank can concentrate on assets repricing by analysing the future interest rate changes to avoid interest rate risks.

The cumulative gaps depict that in the year 2018 to 2019 there is a positive gap for Day 1 bucket and the remaining maturity bucket gaps are in negative.

From the year 2019-2020 and 2020-2021 all the cumulative gaps are in negative. This can also be a strategy opted by the bank intentionally to take advantage of the falling interest rates situation during that time.

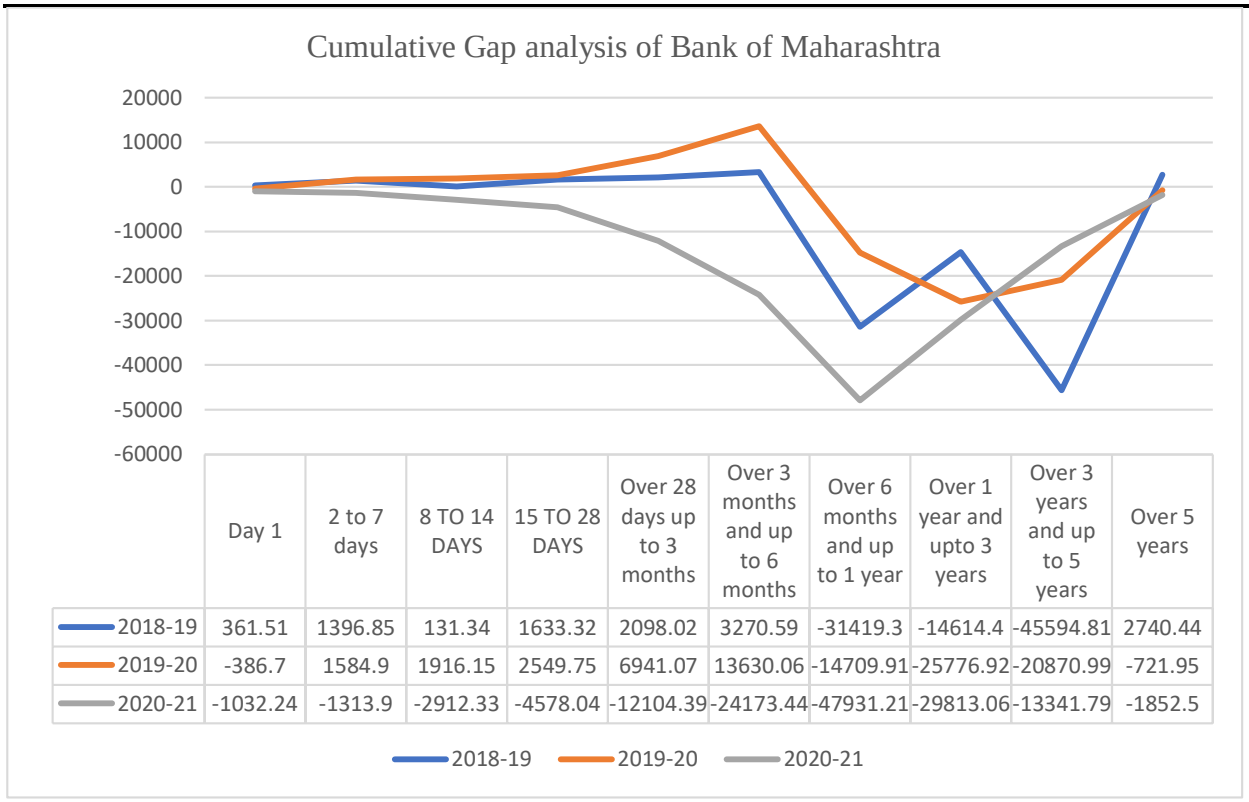


	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
2018-19	361.51	1035.34	-1265.51	1501.98	464.7	1172.57	-34689.89	16804.9	-30980.41	48335.25
2019-20	-386.7	1971.6	331.25	633.6	4391.32	6688.99	-28339.97	-11067.01	4905.93	20149.04
2020-21	-1032.24	-281.66	-1598.43	-1665.71	-7526.35	-12069.05	-23757.77	18118.15	16471.27	11489.29

The maturity gaps depict that in the year 2018 to 2019 there is a positive gap in the buckets of Day 1, 2 to 7 days, 15 to 28 days, over 28 days up to 3 months, over 3 months and up to 6 months, over 1 year and up to 3 years, over 5 years. The remaining maturity buckets are having a negative gap.

In the year 2019-2020, most of the maturity buckets for short term duration are having a positive gap because of falling interest rates at that time.

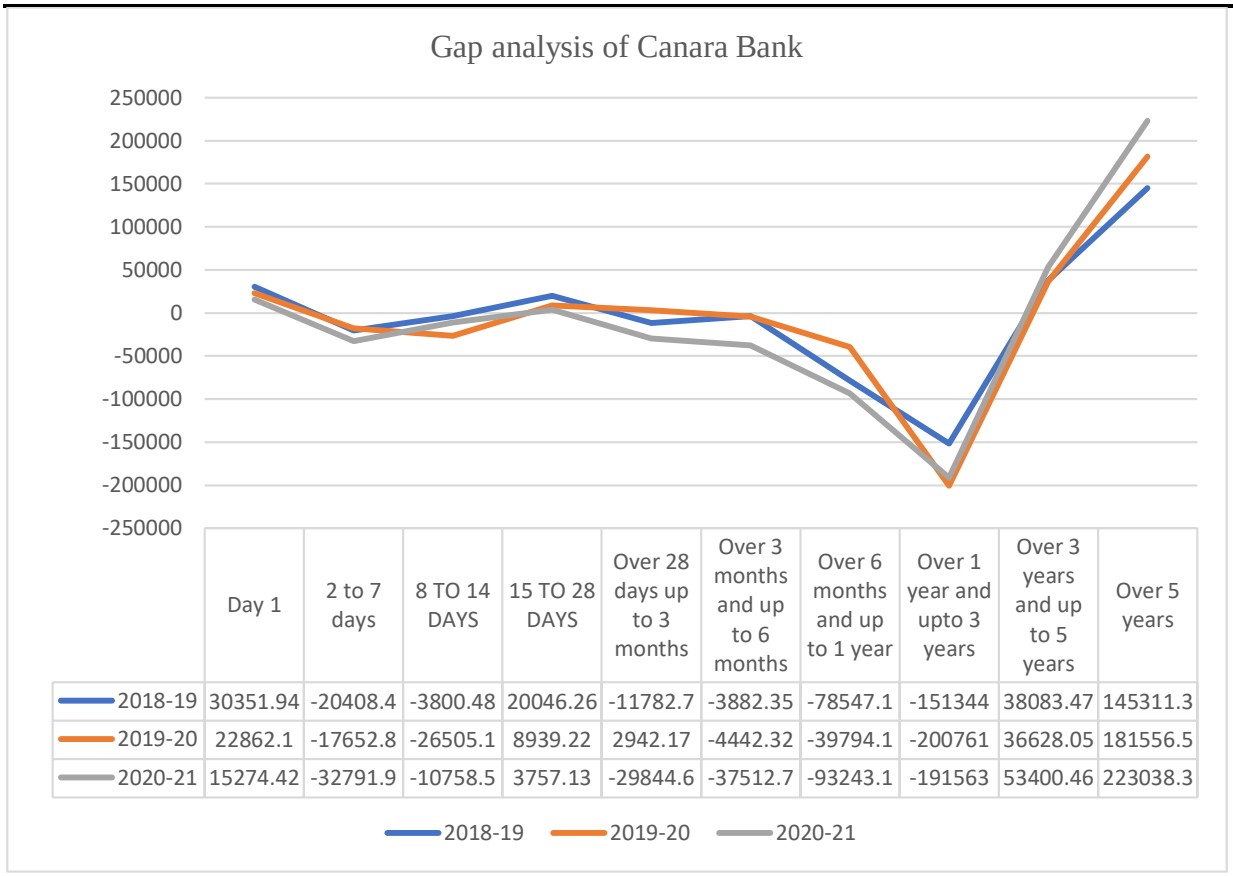
In the year 2020-2021 the gaps are positive for the maturity buckets of over 6 months and up to 1 year, over 1 year and up to 3 years, over 5 years. The remaining maturity buckets are in negative.



	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
2018-19	361.51	1396.85	131.34	1633.32	2098.02	3270.59	-31419.3	-14614.4	-45594.81	2740.44
2019-20	-386.7	1584.9	1916.15	2549.75	6941.07	13630.06	-14709.91	-25776.92	-20870.99	-721.95
2020-21	-1032.24	-1313.9	-2912.33	-4578.04	-12104.39	-24173.44	-47931.21	-29813.06	-13341.79	-1852.5

The cumulative gaps in the year 2018 to 2019 are positive for day 1, 2 to 7 days, 8 to 14 days, 15 to 28 days, over 28 days up to 3 months, over 3 months and up to 6 months buckets.

For the year 2019-2020 the positive gaps are observed in 2 to 7 days, 8 to 14 days, 15 to 28 days, over 28 days up to 3 months, over 3 months and up to 6 months and the remaining are in negative. The highest positive and negative gaps are over 1 year and up to 3 years maturity bucket i.e.,Rs.13630.06 crores and over 6 months and up to 1 year maturity bucket i.e.,Rs. -25776.92 crores. In the year 2020-2021 all the buckets are having a negative cumulative gap.

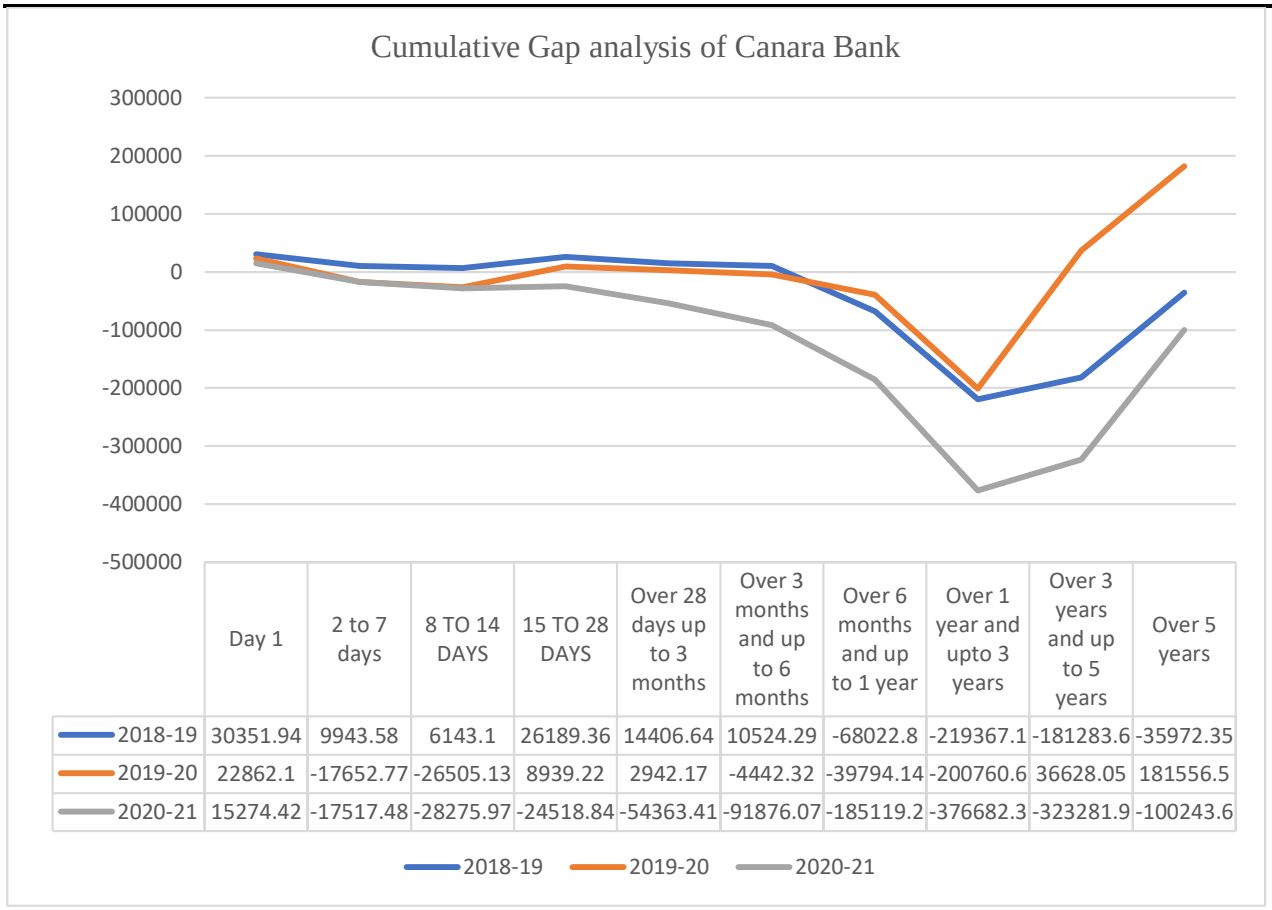


	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
2018-19	30351.94	-20408.4	-3800.48	20046.26	-11782.7	-3882.35	-78547.1	-151344	38083.47	145311.3
2019-20	22862.1	-17652.8	-26505.1	8939.22	2942.17	-4442.32	-39794.1	-200761	36628.05	181556.5
2020-21	15274.42	-32791.9	-10758.5	3757.13	-29844.6	-37512.7	-93243.1	-191563	53400.46	223038.3

In the year 2018-2019 the positive gaps are observed in Day 1, 15 to 28 days, over 3 years and up to 5 years, over 5 years maturity buckets. The remaining figures of maturity buckets are in negative. The most affected positive and negative cumulative gaps are over 3 years and up to 5 years maturity bucket i.e., 38083.47 crores and over 6 months and up to 1 year maturity bucket i.e., -78547.09.

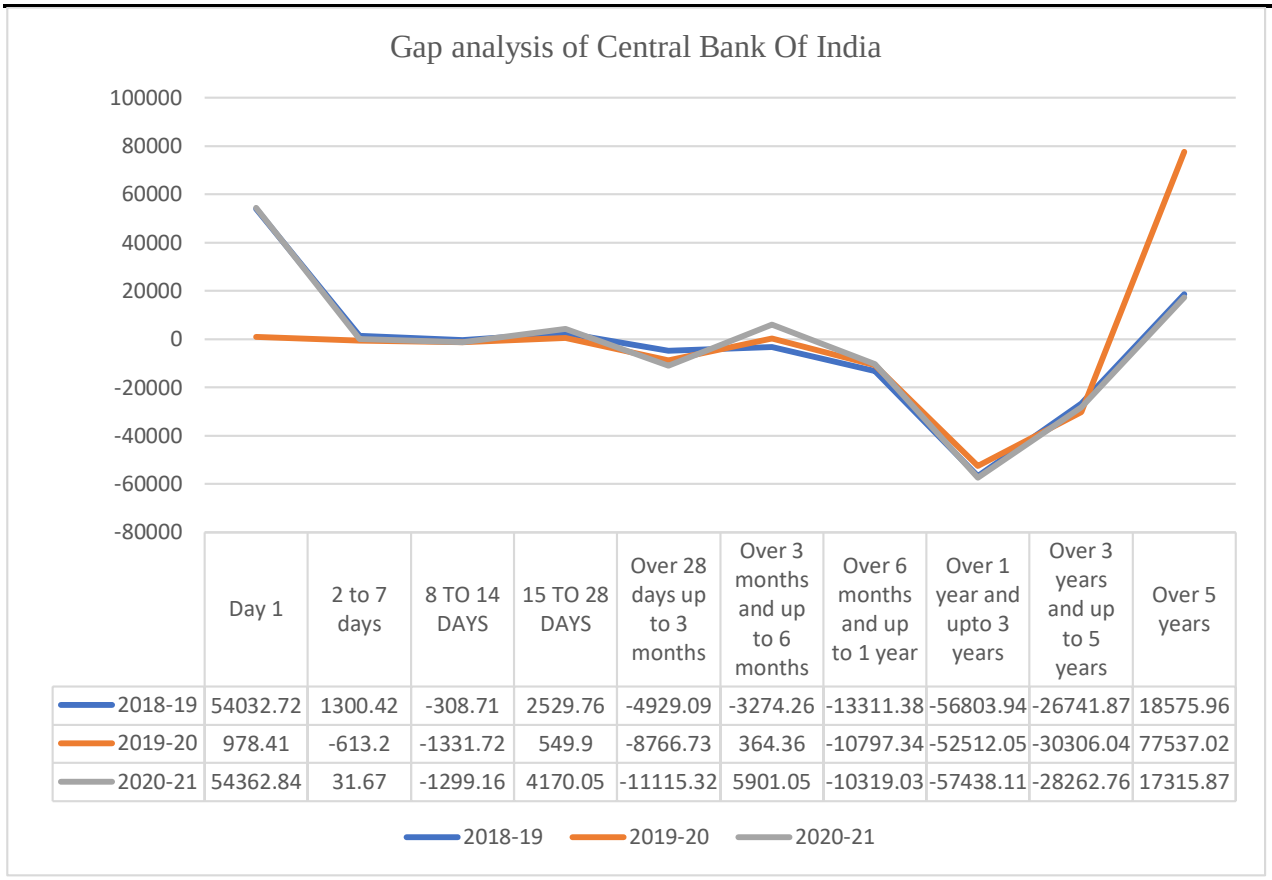
From the year 2019-2020 the positive gap day 1, 15 to 28 days, over 28 days up to 3 months, over 3 years and up to 5 years, over 5 years. The remaining figures of maturity buckets are in negative. The most affected positive and negative gaps are over 5 years maturity bucket i.e., 181556.5 crores and over 6 months and up to 1 year bucket i.e., -39794.14.

From the year 2020-2021 the positive gap day 1,15 to 28 days, over 3 years and up to 5 years, over 5 years. The remaining figures of maturity buckets are in negative. The most affected positive and negative gaps are over 5 years maturity bucket i.e., 223038.33 crores and over 6 months and up to 1 year maturity bucket i.e., -93243.09.



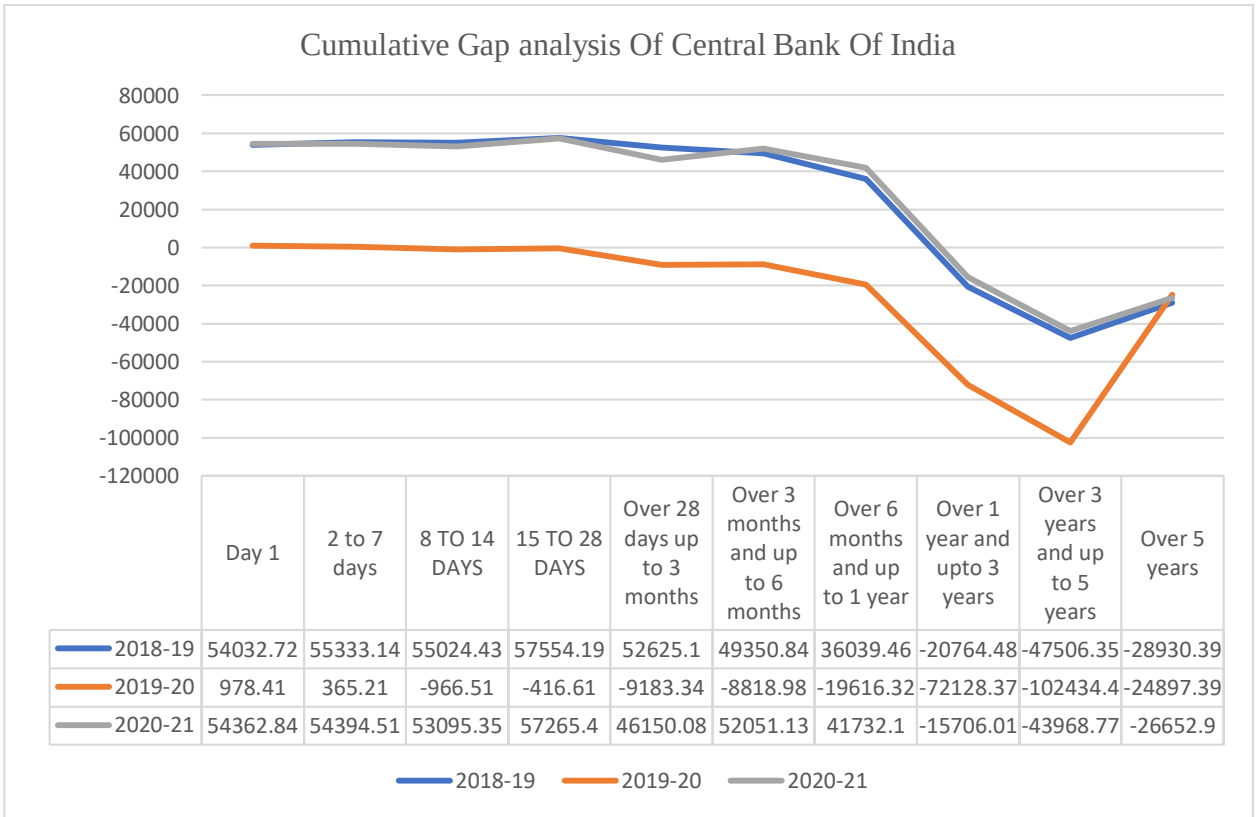
	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
2018-19	30351.94	9943.58	6143.1	26189.36	14406.64	10524.29	-68022.8	-219367.1	-181283.6	-35972.35
2019-20	22862.1	-17652.77	-26505.13	8939.22	2942.17	-4442.32	-39794.14	-200760.6	36628.05	181556.5
2020-21	15274.42	-17517.48	-28275.97	-24518.84	-54363.41	-91876.07	-185119.2	-376682.3	-323281.9	-100243.6

The distributions of cumulative gaps over 3 years depicts that in the year 2018-19 there are more of positive gaps for the buckets except the long term buckets over 6 upto 1 year – over 5 years. Canara bank made an advantage of falling interest rate scenario. In the year 2020-21, the bank maintained more of negative gaps with the decreasing interest rates at that time so that the impact on NII would be positive for the bank.



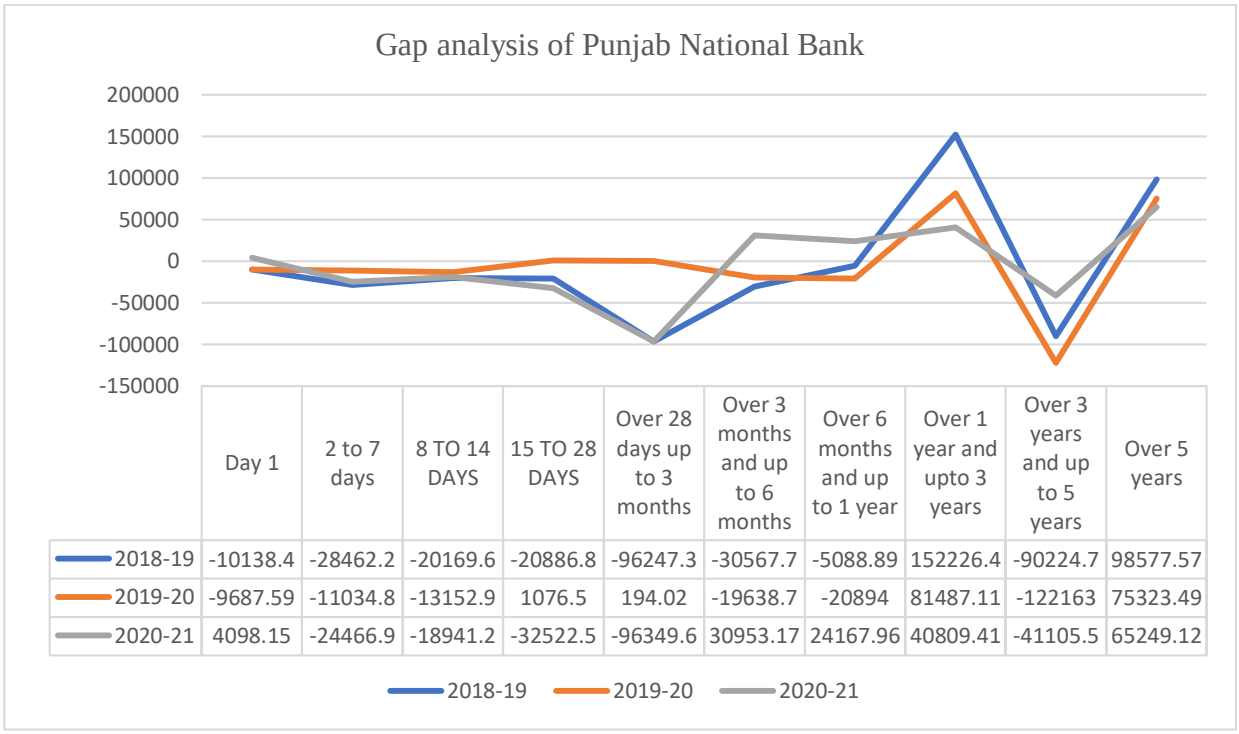
	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
2018-19	54032.72	1300.42	-308.71	2529.76	-4929.09	-3274.26	-13311.38	-56803.94	-26741.87	18575.96
2019-20	978.41	-613.2	-1331.72	549.9	-8766.73	364.36	-10797.34	-52512.05	-30306.04	77537.02
2020-21	54362.84	31.67	-1299.16	4170.05	-11115.32	5901.05	-10319.03	-57438.11	-28262.76	17315.87

The maturity gaps in the year 2018-2019 are positive in the buckets Day 1, 2 to 7 days,15 to 28 days and over 5 years. The remaining gaps are in negative. In the year 2019-2020 the positive gap maturity buckets are Day 1, 15 to 28 days, over 3 months and up to 6 months, and over 5 years. The remaining maturity buckets are holding negative gaps. The year 2020-2021 has positive gaps in Day 1, 2 to 7 days,15 to 28 days, over 3 months and up to 6 months, over 5 years buckets and the remaining maturity buckets are in negative.

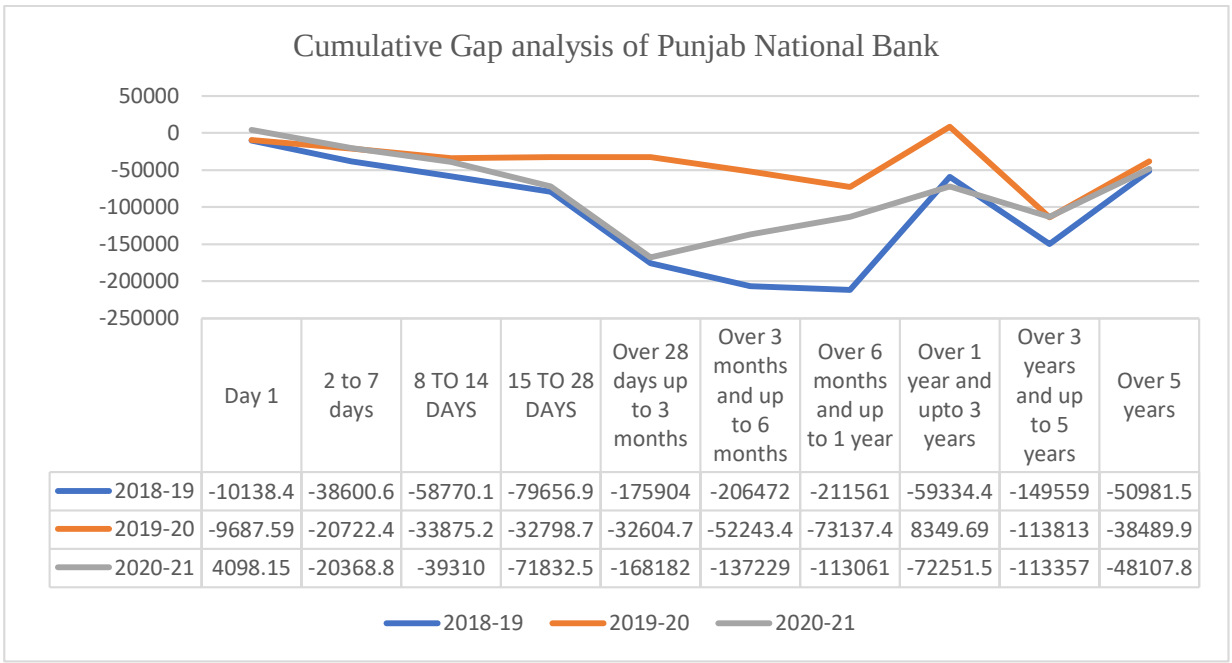


	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
2018-19	54032.72	55333.14	55024.43	57554.19	52625.1	49350.84	36039.46	-20764.48	-47506.35	-28930.39
2019-20	978.41	365.21	-966.51	-416.61	-9183.34	-8818.98	-19616.32	-72128.37	-102434.4	-24897.39
2020-21	54362.84	54394.51	53095.35	57265.4	46150.08	52051.13	41732.1	-15706.01	-43968.77	-26652.9

The cumulative gaps for Central Bank of India in the year 2020-21 are more of positive in nature for both short and long durations. As there was a decreasing interest rates scenario, the strategy used by the bank for maintaining positive gaps might lead the bank to face liquidity issues if not corrected.

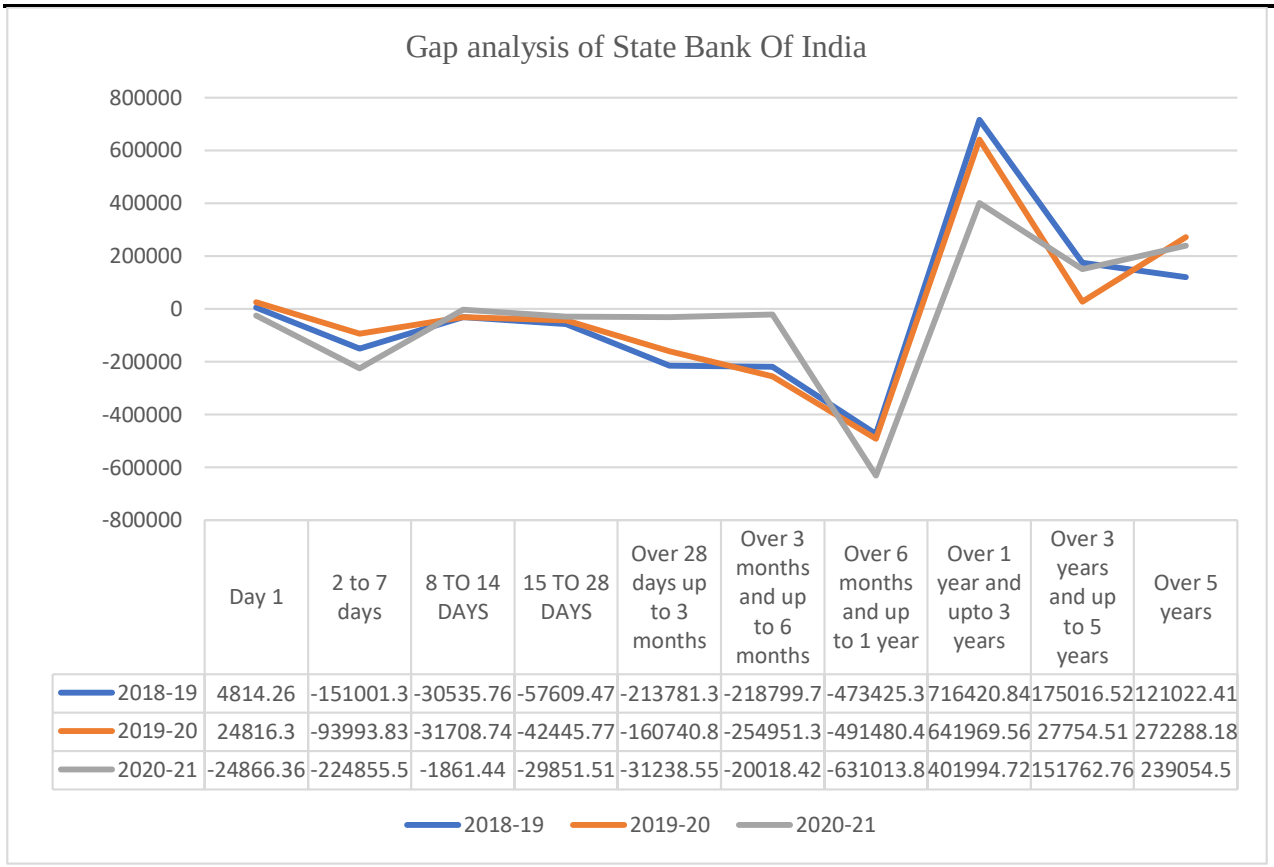


	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
2018-19	-10138.4	-28462.2	-20169.6	-20886.8	-96247.3	-30567.7	-5088.89	152226.4	-90224.7	98577.57
2019-20	-9687.59	-11034.8	-13152.9	1076.5	194.02	-19638.7	-20894	81487.11	-122163	75323.49
2020-21	4098.15	-24466.9	-18941.2	-32522.5	-96349.6	30953.17	24167.96	40809.41	-41105.5	65249.12

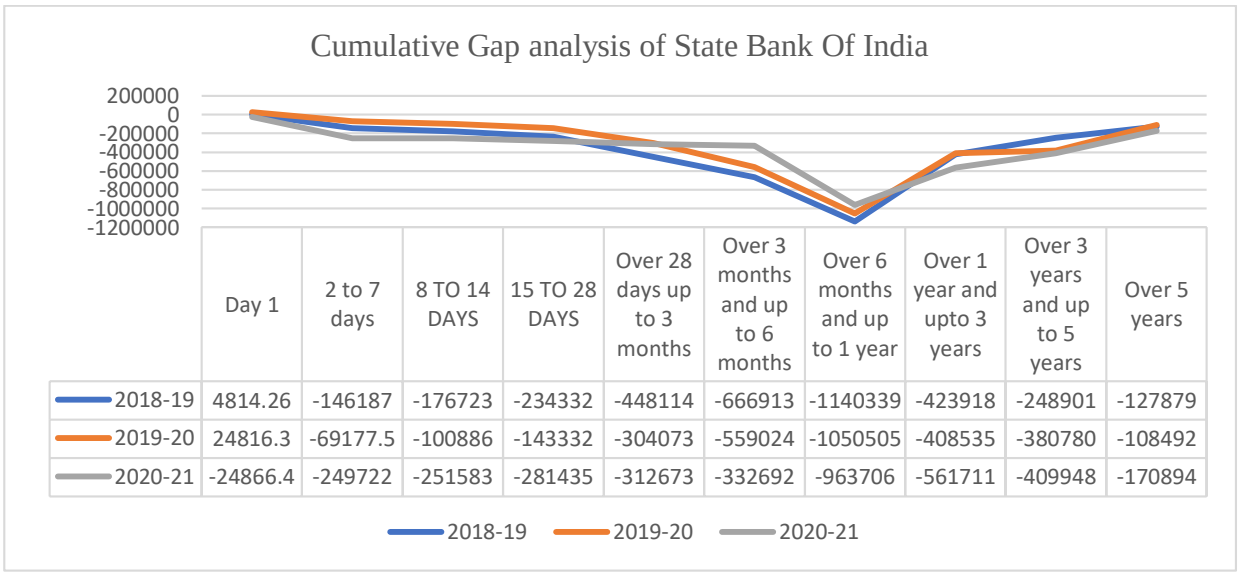


	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
2018-19	-10138.4	-38600.6	-58770.1	-79656.9	-175904	-206472	-211561	-59334.4	-149559	-50981.5
2019-20	-9687.59	-20722.4	-33875.2	-32798.7	-32604.7	-52243.4	-73137.4	8349.69	-113813	-38489.9
2020-21	4098.15	-20368.8	-39310	-71832.5	-168182	-137229	-113061	-72251.5	-113357	-48107.8

Punjab National Bank maintained negative gaps in most of the maturity buckets taking an advantage of the falling interest rates and maintained the sound ALM policy. The bank might have taken care by being vigilant of the changes in interests to occur in future by using various hedging strategies.



	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
2018-19	4814.26	-151001.3	-30535.76	-57609.47	-213781.3	-218799.7	-473425.3	716420.84	175016.52	121022.41
2019-20	24816.3	-93993.83	-31708.74	-42445.77	-160740.8	-254951.3	-491480.4	641969.56	27754.51	272288.18
2020-21	-24866.36	-224855.5	-1861.44	-29851.51	-31238.55	-20018.42	-631013.8	401994.72	151762.76	239054.5



	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
2018-19	4814.26	-146187	-176723	-234332	-448114	-666913	-1140339	-423918	-248901	-127879
2019-20	24816.3	-69177.5	-100886	-143332	-304073	-559024	-1050505	-408535	-380780	-108492
2020-21	-24866.4	-249722	-251583	-281435	-312673	-332692	-963706	-561711	-409948	-170894

State Bank of India maintained negative cumulative gaps in most of the maturity buckets. This gives a picture of sound ALM policy maintained by the bank aligning with changing interest rate scenarios and also being attentive towards futuristic changes in interest rates.

Sensitivity Analysis:

One of the research objectives is to analyse the impact of interest rate changes on the net interest income of the bank. For this, 2 different interest rate change scenarios are considered in this study:

- Interest rate decrease by 50 basis points and
- Interest rate increase by 50 basis points.

The present study includes the sensitivity analysis for the year 2020-21 for all the banks considered in this study.

The net interest income of the bank can be defined as the difference between interest income received by the bank and the interest expended by the bank.

Net Interest Income, NII = Interest Income – Interest Expense

The change in NII can be calculated with the following formula:

▲NII = Gap * Change in interest rate

Gap = Rate Sensitive Assets – Rate Sensitive Liabilities.

The following table gives information about the impact of interest rate sensitivity towards NII.

NII IMPACT ANALYSIS		
GAP	**INTEREST RATE MOVEMENT**	**IMPACT ON NII**
POSITIVE (RSA>RSL)	UP	POSITIVE
POSITIVE (RSA>RSL)	DOWN	NEGATIVE
NEGATIVE(RSL>RSA)	UP	NEGATIVE
NEGATIVE(RSL>RSA)	DOWN	POSITIVE
ZERO (RSA=RSL)	UP OR DOWN	Zero impact on NII

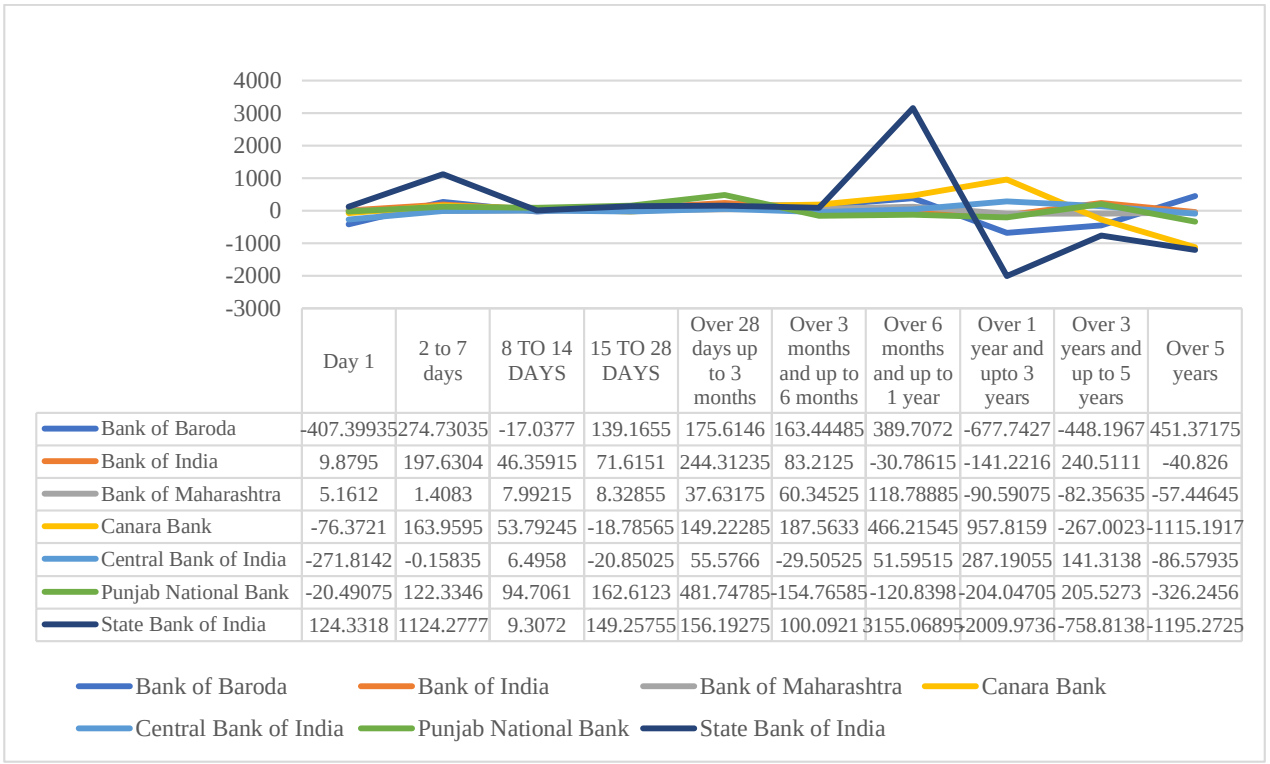
The sensitivity analysis is basically conducted after the preparation of gap report. This analysis is done to ensure that the banks can absorb the undefined negative impact due to adverse movement in interest rates. The duty of performing this analysis is entrusted with the ALCO of a bank so that the gaps can be managed within the prescribed limits set by the bank.

- **Scenario 1: Interest rate decrease by 50 basis points**

  The sample calculation for the first bucket of Bank of Baroda considering the gap value for 2020-21 is as follows:

▲NII = Gap * Change in interest rate = 81480*(-50/10000) = -407.4 cr.

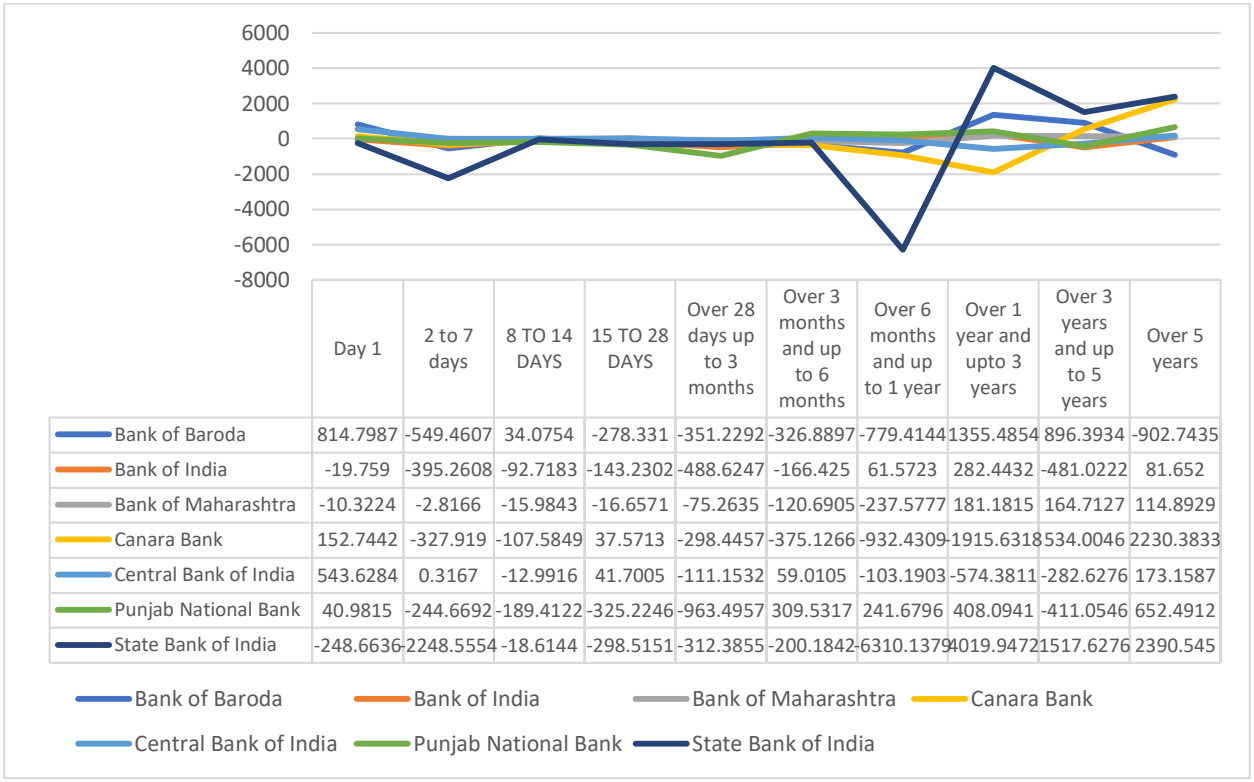
This can be interpreted as: "If the gap is positive and if the interest rate is likely to decrease in the future, then there would be a negative impact on the bank's NII. Here the NII is likely to decrease by Rs 407.4 cr". To overcome this scenario, the bank must either focus on increasing its RSL so that there would be a negative gap which helps in maintaining positive NII or try to maintain a zero gap so that there would be no change in the NII.



	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
Bank of Baroda	-407.39935	274.73035	-17.0377	139.1655	175.6146	163.44485	389.7072	-677.7427	-448.1967	451.37175
Bank of India	9.8795	197.6304	46.35915	71.6151	244.31235	83.2125	-30.78615	-141.2216	240.5111	-40.826
Bank of Maharashtra	5.1612	1.4083	7.99215	8.32855	37.63175	60.34525	118.78885	-90.59075	-82.35635	-57.44645
Canara Bank	-76.3721	163.9595	53.79245	-18.78565	149.22285	187.5633	466.21545	957.8159	-267.0023	-1115.1917
Central Bank of India	-271.8142	-0.15835	6.4958	-20.85025	55.5766	-29.50525	51.59515	287.19055	141.3138	-86.57935
Punjab National Bank	-20.49075	122.3346	94.7061	162.6123	481.74785	-154.76585	-120.8398	-204.04705	205.5273	-326.2456
State Bank of India	124.3318	1124.2777	9.3072	149.25755	156.19275	100.0921	3155.06895	2009.9736	-758.8138	-1195.2725

From the above graph it can be interpreted that in the short-term maturity buckets, State Bank of India, Bank of India and Bank of Maharashtra are depicting positive NII values. This clearly states that the banks are maintaining a sound ALM strategy and are least exposed to the interest rate risk. These banks might have focussed on the future interest rate changes and also been vigilant by taking positions in interest swaps, futures and options. In the long run, SBI, Canara Bank and Bank of Baroda are exposed more to the interest rate shocks as they are carrying the highest negative gap values and these banks can take corrective measures for sustaining the shocks.

- **Scenario 2: Interest rate increase by 100 basis points**



	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
Bank of Baroda	814.7987	-549.4607	34.0754	-278.331	-351.2292	-326.8897	-779.4144	1355.4854	896.3934	-902.7435
Bank of India	-19.759	-395.2608	-92.7183	-143.2302	-488.6247	-166.425	61.5723	282.4432	-481.0222	81.652
Bank of Maharashtra	-10.3224	-2.8166	-15.9843	-16.6571	-75.2635	-120.6905	-237.5777	181.1815	164.7127	114.8929
Canara Bank	152.7442	-327.919	-107.5849	37.5713	-298.4457	-375.1266	-932.4309	-1915.6318	534.0046	2230.3833
Central Bank of India	543.6284	0.3167	-12.9916	41.7005	-111.1532	59.0105	-103.1903	-574.3811	-282.6276	173.1587
Punjab National Bank	40.9815	-244.6692	-189.4122	-325.2246	-963.4957	309.5317	241.6796	408.0941	-411.0546	652.4912
State Bank of India	-248.6636	-2248.5554	-18.6144	-298.5151	-312.3855	-200.1842	-6310.1379	4019.9472	1517.6276	2390.545

In this scenario, the study includes the testing of effect of NII when the interest rate increases by 100 basis points on all the maturity buckets for all the banks during the year 2020-21. In general, it can be said that the banks which are maintaining positive gaps could be benefitted as the NII can also have a positive impact. From the table, it can be stated that State Bank of India would be most affected by the NII as it has negative results in short term but in the long run, it is having a positive impact on NII. Hence the bank can take measures to balance the NII from getting adversely impacted by the interest rate deviations. It can either focus on increasing its RSA or decreasing its RSL so the negative gap reduces. It can also try to maintain a zero-gap so that the Net Interest Income of the bank would not be impacted. Besides SBI, all the other banks are also having a negative NII value for the scenario of increasing interest rates which might lead the bank to liquidity issues. The banks must have a critical analysis of their cash flows and repricing dates of their assets and liabilities so that they can maintain a good ALM policy.

The other strategies that the banks can use to strengthen their balance sheet is to cover its risk exposures by taking positions in the interest rate and currency derivatives, by implementing securitization on the assets that are not generating any cash flows to the banks, by financing the gaps from call/term money borrowings, repos and bills discounting, by following up NPAs, accurate forecasting of cash flows, etc.

CONCLUSION

There is a lot of importance given by RBI to the area of Asset Liability Management in Banks. ALM enhances the focus on the risk management area and also attempts to match the assets and liabilities as per the maturities and also the interest rate sensitivities. ALM helps the banks in mitigating the risks that arise due to the mismatches of assets and liabilities and also the liquidity risk. RBI has entrusted the job of ALM on ALCO of respective banks so that they review the variances in actual performances and also the projected performances with regards to the balance sheet ratios, Besides these in the present-day situation, technology also has a huge impact on the Banking Industry and they cannot ignore the importance of ALM, Net Interest Margin, and spreads. Basically the ALM process might differ for every bank but the successful implementation of ALM depends on how well the banks are able to manage the risk and also forecast their risk exposures. Most of the studies and research stated that the banks can implement effective ALM policy only when the assets and liabilities data including the off-balance sheet transactions data is available promptly so that the residual maturity gaps can be decreased. Though the Indian banks use computerized mechanisms for the ALM process, the availability of real-time data is still a challenge. The time involved in preparing a gap report and analyzing the report to take corrective actions can also lead to change in the maturity dates/repricing dates of short-term maturity/repricing buckets and the strategy implemented by the ALCO may not be effective. Hence, the MIS team of the bank plays a vital role in ALM process by providing timely data in preparing reports to analyse the deposit and lending pattern trends. The economic research division of the banks should also focus on providing the timely data required for forecasting the future trends in lending and borrowing patter, interest rates and exchange rates. It can be concluded that the MIS division of a bank and the economic research division of a bank help in assessing and mitigating the current risk and future risks.

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Annexures:

2018-19

Bank of Baroda

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	61953.8	19164.76	13886.01	40481.93	61405.14	45362.04	47245.97	250401.03	97579.55	196058.66
RSL	18758.2	59158.45	31365.64	28298.47	106846.7	107268.8	142253.01	220058.64	49791.63	136701.02
GAP	43195.6	-39993.69	-17479.63	12183.46	-45441.56	-61906.76	-95007.04	30342.39	47787.92	59357.64
Cumm Gap	43195.6	3201.91	-14277.72	-2094.26	-47535.82	-109442.58	-204449.62	-174107.23	-126319.31	-66961.67

Bank of India

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	22956.01	15056.68	9568.38	15326.73	86560.85	44604.84	58778.69	134838.75	64158	136041.76
RSL	16527	53365.05	15954.26	22976.36	106189.22	65040.38	66148.33	141595.68	82710.28	134886.2
GAP	6429.01	-38308.37	-6385.88	-7649.63	-19628.37	-20435.54	-7369.64	-6756.93	-18552.28	1155.56
Cumm Gap	6429.01	-31879.36	-38265.24	-45914.87	-65543.24	-85978.78	-93348.42	-100105.35	-118657.63	-117502.07

Bank of Maharashtra

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	1596.33	9896.39	2870.92	6022.37	10759.52	11915.55	9668.78	42162.23	13412.94	54469.16
RSL	1234.82	8861.05	4136.43	4520.39	10294.82	10742.98	44358.67	25357.33	44393.35	61330.91
Gap	361.51	1035.34	-1265.51	1501.98	464.7	1172.57	-34689.89	16804.9	-30980.41	48335.25
Cumm Gap	361.51	1396.85	131.34	1633.32	2098.02	3270.59	-31419.3	-14614.4	-45594.81	27402.44

Canara Bank

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	36741.55	13258.28	14178.08	36142.75	55193.06	51376.56	63205.62	118385.26	67865.41	182763.3
RSL	6389.61	33666.64	17978.56	16096.49	66975.78	55258.91	141752.71	269729.53	29781.94	374520.05
GAP	30351.94	-20408.36	-3800.48	20046.26	-11782.72	-3882.35	-78547.09	-151344.27	38083.47	145311.25
Cumm Gap	30351.94	9943.58	6143.1	26189.36	14406.64	10524.29	-68022.8	-219367.07	-181283.6	-359722.35

Central Bank of India

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	55976.07	3654.81	1566.39	7590.84	11188.95	8320.93	12661.46	78979.36	25258.57	68052.14
RSL	1943.35	2354.39	1875.1	5061.08	16118.04	11595.19	25972.84	135783.3	52000.44	49476.18
GAP	54032.72	1300.42	-308.71	2529.76	-4929.09	-3274.26	-13311.38	-56803.94	-26741.87	18575.96

Cumm GAP	54032.72	55333.14	55024.43	57554.19	52625.1	49350.84	36039.46	-20764.48	-47506.35	-28930.39
Punjab National Bank										
Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	7400.71	6420.65	2963.2	20663.6	23033.27	22714.48	36598.65	261194.68	77062.79	248367.83
RSL	17539.08	34882.83	23132.77	41550.41	119280.6	53282.13	41687.54	108968.25	167287.49	149790.26
GAP	-10138.37	-28462.18	-20169.57	-20886.81	-96247.33	-30567.65	-5088.89	152226.43	-90224.7	98577.57
Cumm GAP	-10138.37	-38600.55	-58770.12	-79656.93	-175904.26	-206471.91	-211560.8	-59334.37	-149559.07	-50981.5
State Bank of India										
Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	66550.77	22959.88	16216.05	62921.38	131204.79	130481.57	184200.86	1354465.03	555382.25	1019966.99
RSL	61736.51	173961.22	46751.81	120530.85	344986.05	349281.3	657626.14	638044.19	380365.73	898944.58
GAP	4814.26	-151001.34	-30535.76	-57609.47	-213781.26	-218799.73	-473425.28	716420.84	175016.52	121022.41
Cumm GAP	4814.26	-146187.08	-176722.84	-234332.31	-448113.57	-666913.3	-1140338.58	-423917.74	-248901.22	-127878.81
2019-20										
Bank of Baroda										
Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	125931.67	12607.05	10000.77	21786.75	84954.31	66055.42	75529.33	399836.89	170997.86	214026.76
RSL	19689.79	38740.36	60986.88	35341.86	131501.77	84707.99	176716.68	302900.4	86265.06	279283.94
GAP	106241.88	-26133.31	-50986.11	-13555.11	-46547.46	-18652.57	-101187.35	96936.49	84732.8	-65257.18
Cumm GAP	106241.88	80108.57	29122.46	15567.35	-30980.11	-49632.68	-150820.03	-53883.54	30849.26	-34407.92
Bank of India										
Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	17123.05	7794.29	6548.37	15861.36	51949.05	21701.79	41224.13	174586.99	77812.75	207895.01
RSL	20233.77	24672.73	23678.48	26663.5	92298.6	45466.76	36239.56	150144.96	97884.5	192257.95
GAP	-3110.72	-16878.44	-17130.11	-10802.14	-40349.55	-23764.97	4984.57	24442.03	-20071.75	15637.06
Cumm GAP	-3110.72	-19989.16	-37119.27	-47921.41	-88270.96	-112035.93	-107051.36	-82609.33	-102681.08	-87044.02
Bank of Maharashtra										

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	896.9	5260.2	2738.69	5892.97	15002.52	17963.63	15706.36	24544.87	18365.04	578105.55
RSL	1283.6	3288.6	2407.44	5259.37	10611.2	11274.64	44046.33	35611.88	13459.11	376615.51
GAP	-386.7	1971.6	331.25	633.6	4391.32	6688.99	-28339.97	-11067.01	4905.93	201490.4
Cum GAP	-386.7	1584.9	1916.15	2549.75	6941.07	13630.06	-14709.91	-25776.92	-20870.99	-721.95

Canara Bank

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	28753.43	13792.92	10214.32	30513.54	59714.03	45383.83	81399.87	102281.84	70529.14	2154218.33
RSL	5891.33	31445.69	36719.45	21574.32	56771.86	49826.15	121194.01	303042.42	33901.09	338601.83
GAP	22862.1	-17652.77	-26505.13	8939.22	2942.17	-4442.32	-39794.14	-200760.58	36628.05	181556.5
Cum GAP	22862.1	-17652.77	-26505.13	8939.22	2942.17	-4442.32	-39794.14	-200760.58	36628.05	181556.5

Central Bank of India

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	2889.87	3821.1	1480.75	11812.87	11732.36	20402.79	16347.84	88661.05	26192.15	127717.05
RSL	1911.46	4434.3	2812.47	11262.97	20499.09	20038.43	27145.18	141173.1	56498.19	501800.03
GAP	978.41	-613.2	-1331.72	549.9	-8766.73	364.36	-10797.34	-52512.05	-30306.04	77537.02
Cum GAP	978.41	365.21	-966.51	-416.61	-9183.34	-8818.98	-19616.32	-72128.37	-102434.41	-24897.39

Punjab National Bank

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	5273.21	8208.31	5331.25	17731.12	51512.78	30878.35	50191.95	229109.58	61355.8	293360.15
RSL	14960.8	19243.09	18484.11	16654.62	51318.76	50517.04	71085.97	147622.47	183518.92	218036.66
GAP	-9687.59	-11034.78	-13152.86	1076.5	194.02	-19638.69	-20894.02	81487.11	-122163.12	75323.49
Cum GAP	-9687.59	-20722.37	-33875.23	-32798.73	-32604.71	-52243.4	-73137.42	8349.69	-113813.43	-38489.94

State Bank of India

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	102095.38	23929.46	28710.54	68833.54	189024.4	157293.37	230353.93	1377258.17	448338.13	1197231.32
RSL	77279.08	117923.29	60419.28	111279.31	349765.18	412244.68	721834.33	735288.61	420583.62	924943.14
GAP	24816.3	-93993.83	-31708.74	-42445.77	-160740.78	-254951.31	-491480.4	641969.56	27754.51	272288.18
Cum GAP	24816.3	-69177.53	-100886.27	-143332.04	-304072.82	-559024.13	-1050504.53	-408534.97	-380780.46	-1084

										92.28

2020-21

Bank of Baroda

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
Advances	11174.8	10419.14	22931.81	8677.99	25090.53	26138.11	38915.98	367477.27	81893.58	113581.3
Investments	41842.37	2289.55	725.11	1470.43	4520.8	3761.25	9471.84	45818.38	72135.2	79185.34
Foreign currency assets	52726.84	3845.68	6881.99	7433.54	23027.33	17336.49	12851.16	44537.36	16194.68	12434.25
Foreign currency liabilities	8355.37	9576.34	3880.85	12562.06	12934.89	14563.72	18295.4	34935.19	10357.87	14215.13
Deposits	15852.79	33566.64	23196.59	32853	74413.06	64940.25	114939.65	270930.51	57978.02	278326.41
Borrowings	55.98	28357.46	53.93	0	413.63	420.85	5945.37	16418.77	12248.23	2933.7
RSA	105744.01	16554.37	30538.91	17581.96	52638.66	47235.85	61238.98	457833.01	170223.46	205200.89
RSL	24264.14	71500.44	27131.37	45415.06	87761.58	79924.82	139180.42	322284.47	80584.12	295475.24
GAP	-81479.87	-54946.07	3407.54	-27833.1	-35122.92	-32688.97	-77941.44	135548.54	89639.34	-90274.35
Cum GAP	-81479.87	-26533.8	29941.34	2108.24	-33014.68	-65703.65	-143645.09	-8096.55	81542.79	-87731.56

Bank of India

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	21070.66	19029.29	8912.37	15137.83	30126.27	29252.99	33577.46	199170.36	60708.58	223288.64
RSL	23046.56	58555.37	18184.2	29460.85	78988.74	45895.49	27420.23	170926.04	108810.8	215123.44
GAP	-1975.9	-39526.08	-9271.83	-14323.02	-48862.47	-16642.5	6157.23	28244.32	-48102.22	8165.2
Cum GAP	-1975.9	-41501.98	-50773.81	-65096.83	-113959.3	-130601.8	-124444.57	-96200.25	-144302.47	-136137.27

Bank of Maharashtra

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	1290.33	4841.02	1711.44	6242.14	12064	11913.08	16173.29	46993.02	35742.2	50271.97
RSL	2322.57	5122.68	3309.87	7907.85	19590.35	23982.13	39931.06	28874.87	19270.93	38782.68
GAP	-1032.24	-281.66	-1598.43	-1665.71	-7526.35	-12069.05	-23757.77	18118.15	16471.27	11489.29
Cum GAP	-1032.24	-1313.9	-2912.33	-4578.04	-12104.39	-24173.44	-47931.21	-29813.06	-13341.79	-18525

Canara Bank

Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	30577.78	18594.67	8660.26	94182.14	44065.48	47509.96	86451.49	200707.3	128845.94	349550.61

RSL	153033.36	51386.57	19418.75	90425.01	73910.05	85022.62	179694.58	392270.48	75445.48	126512.28
GAP	15274.42	-32791.9	-10758.49	3757.13	-29844.57	-37512.66	-93243.09	-191563.18	53400.46	223038.33
Cum GAP	15274.42	-17517.48	-28275.97	-24518.84	-54363.41	-91876.07	-185119.16	-376682.34	-323281.88	-100243.55
Central Bank of India										
Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	56425.19	3935.39	1290.56	17969.33	10919.16	23734.13	31215.55	94114.42	33312.62	72499.3
RSL	2062.35	3903.72	2589.72	13799.28	22034.48	17833.08	41534.58	151552.53	61575.38	55183.43
GAP	54362.84	31.67	-1299.16	4170.05	-11115.32	5901.05	-10319.03	-57438.11	-28262.76	17315.87
Cum GAP	54362.84	54394.51	53095.35	57265.4	46150.08	52051.13	41732.1	-15706.01	-43968.77	-26652.9
Punjab National Bank										
Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	27831.63	15394.81	5350.07	17990.9	72232.15	74343.06	64412.77	202901.9	265354.47	406566.94
RSL	23733.48	39861.73	24291.29	50513.36	168581.72	43389.89	40244.81	162092.49	306459.93	341317.82
GAP	4098.15	-24466.92	-18941.22	-32522.46	-96349.57	30953.17	24167.96	40809.41	-41105.46	65249.12
Cum GAP	4098.15	-20368.77	-39309.99	-71832.45	-168182.02	-137228.85	-113060.89	-72251.48	-113356.94	-48107.82
State Bank of India										
Details	Day 1	2 to 7 days	8 TO 14 DAYS	15 TO 28 DAYS	Over 28 days up to 3 months	Over 3 months and up to 6 months	Over 6 months and up to 1 year	Over 1 year and upto 3 years	Over 3 years and up to 5 years	Over 5 years
RSA	64913.75	19015.4	39692.57	59521.39	158418.99	211496.43	350648.46	1323400.48	623411.82	1395112.81
RSL	89780.11	24387 0.94	41554.01	89372.9	189657.54	231514.85	981662.25	921405.76	471649.06	1156058.31
GAP	-24866.36	-224855.54	-1861.44	-29851.51	-31238.55	-20018.42	-631013.79	401994.72	151762.76	239054.5
Cum GAP	-24866.36	-249721.9	-251583.3	-281434.85	-312673.4	-332691.82	-963705.61	-561710.89	-409948.13	-170893.63