



# A STUDY ON THE RESERVE BANK OF INDIA MORATORIUM POLICY IMPACT ON COMAPANIES AND BANKING PERFORMANCE

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**Abstract:** The paper aims to determine the impact of the Reserve Bank of India moratorium (issued on 27th March 2020) on the company and banking performance. The paper analysis has been divided into two parts namely company and banking performance, wherein in the case of company performance, the relationship between the decision to apply for the moratorium and operation efficiencies has been established, while for banking performance, the relationship between credit flows and deposit flows with banking performance indicators have been analyzed. Statistical analysis has been done using varied tools such as Mann-Whitney's test, regression analysis and Pearson's correlation analysis. It has been observed that there is little to no significant impact on the decision to apply to the moratorium on the operating profits of companies, while for the banking performance, there is a negative relationship between credit flow rates and net interest margin, signifying the rise of Non-Performing Assets (NPAs). It is recommended to companies to apply for the moratorium only if they can generate sufficient future cash flows. Banks should improve credit lending policies and properly evaluate the credit soundness of borrowers before lending loans. The monetary policy committee should work towards making credit cheaper and take measures to control inflation, thereby protecting future value of capital invested in projects.

**Index Terms-** moratorium, non-performing assets, credit flow rates, deposit flow rates, operating efficiency, scheduled commercial banks, easy monthly installments, credit lending policies

## I INTRODUCTION

A moratorium is simply the delay or postponement of paying of dues or liabilities, back to creditors. It is a period of temporary suspension. It ends as per the decision of the policy maker, in this case, the RBI. However, it is not a credit waiver. This implies that applicant must pay back their dues in easy monthly installments (EMIs). This became a major issue for companies which had applied, since the payback amount would be greater than the borrowed amount, plus additional interest. It brings in severe long-term repercussions for both, the borrowers, and the lenders. However, applying for the moratorium was optional. About 328 companies had applied for the same, and out of that 42 companies were publicly listed on the Bombay Stock Exchange (BSE) and National Stock Exchange (NSE). A moratorium is essentially a postponement or delay in paying back dues or obligations to creditors. It is a time of indefinite suspension. It comes to an end when the policymaker, in this case the RBI, decides. However, it is not, a credit waiver.

Due to lack of economic activity in the country, many companies were unable to generate adequate revenue and incurred heavy losses, making it difficult to pay off their debts to their creditors. Obtaining credit from other sources were difficult due to the affected credit ratings during the pandemic. Also, many lenders in the organized sector were under confident because they were concerned if they would be paid back on time or not. Because of the pandemic's impact on credit scores, obtaining credit from other sources was difficult. In addition, many organized-sector lenders were unsure if they would be paid on time or not. To tackle this problem, on 27th March 2020, The Reserve Bank of India initiated a moratorium on loans.

The moratorium helped firms to reduce financial stress due to an allowed repayment delay. This helped firms diversify their finances into their operational activities. The RBI had mentioned in their moratorium announcement that it would not affect their credit ratings. This could help companies attain loans in the future with ease. The interest incurred on the payable amount will also have tax implications. Higher the interest on debt, greater the tax benefits. The policy was not a mere wavier of loans. Rather it is just a

postponement of payment. The applicants must repay their debts in the future on Easy Monthly Installment (EMI) basis. This implies that their repayment amount would exceed their original debt amount due to added interest payments. Because of the additional interest payments, their repayment balance will surpass their initial debt amount. Long-term loans will suffer a significant setback because of the increased tenure.

Hypothetical Example of Cost and Interest Involved with Regards to the Application of the Moratorium

There are two cases which deals with the options to opt for loan moratorium

Case Table Introduction: Assumptions of the Case

Particulars	Amount
Principal Loan Amount	₹20,00,000
Yearly Interest Rate	5%
Monthly Interest Rate	0.42%
Gestation Month	6
Gestation Period Interest	50000
Principle Loan After Gestation Period	20,50,000
No. of Instalments	12
Estimated Monthly Instalment (EMI)	₹1,75,495.34
Total Interest	₹1,05,944.05

Case 1: When the borrower does not opt for the moratorium

Months	EMI	Interest	Principle Repayment	Balance
Mar-2020				20,50,000
Apr-2020	₹ 1,75,495.34	8541.7	₹ 1,66,953.67	₹ 18,83,046.33
May-2020	₹ 1,75,495.34	7846	₹ 1,67,649.31	₹ 17,15,397.02
Jun-2020	₹ 1,75,495.34	7147.5	₹ 1,68,347.85	₹ 15,47,049.17
Jul-2020	₹ 1,75,495.34	6446	₹ 1,69,049.30	₹ 13,77,999.87
Aug-2020	₹ 1,75,495.34	5741.7	₹ 1,69,753.67	₹ 12,08,246.20
Sep-2020	₹ 1,75,495.34	5034.4	₹ 1,70,460.98	₹ 10,37,785.22
Oct-2020	₹ 1,75,495.34	4324.1	₹ 1,71,171.23	₹ 8,66,613.99
Nov-2020	₹ 1,75,495.34	3610.9	₹ 1,71,884.45	₹ 6,94,729.54
Dec-2020	₹ 1,75,495.34	2894.7	₹ 1,72,600.63	₹ 5,22,128.91
Jan-2021	₹ 1,75,495.34	2175.5	₹ 1,73,319.80	₹ 3,48,809.11
Feb-2021	₹ 1,75,495.34	1453.4	₹ 1,74,041.97	₹ 1,74,767.14
Mar-2021	₹ 1,75,495.34	728.2	₹ 1,74,767.14	₹ 0.00

Case 2: When the borrower opts for the moratorium

Months	EMI	Interest	Principle Repayment	Balance
Mar-2020				₹ 20,50,000.00
Apr-2020	₹ 0.00	8541.67	₹ 0.00	₹ 20,58,541.67
May-2020	₹ 0.00	8577.26	₹ 0.00	₹ 20,67,118.92
Jun-2020	₹ 0.00	8613	₹ 0.00	₹ 20,75,731.92
Jul-2020	₹ 0.00	8648.88	₹ 0.00	₹ 20,84,380.80
Aug-2020	₹ 0.00	8684.92	₹ 0.00	₹ 20,93,065.72
Sep-2020	₹ 0.00	8721.11	₹ 0.00	₹ 21,01,786.83
Oct-2020	₹ 1,75,495.34	8757.45	₹ 1,66,737.89	₹ 19,35,048.94
Nov-2020	₹ 1,75,495.34	8062.7	₹ 1,67,432.63	₹ 17,67,616.30
Dec-2020	₹ 1,75,495.34	7365.07	₹ 1,68,130.27	₹ 15,99,486.03
Jan-2021	₹ 1,75,495.34	6664.53	₹ 1,68,830.81	₹ 14,30,655.22
Feb-2021	₹ 1,75,495.34	5961.06	₹ 1,69,534.27	₹ 12,61,120.95
Mar-2021	₹ 1,75,495.34	5254.67	₹ 1,70,240.67	₹ 10,90,880.28
Apr-2021	₹ 1,75,495.34	4545.33	₹ 1,70,950.00	₹ 9,19,930.28
May-2021	₹ 1,75,495.34	3833.04	₹ 1,71,662.29	₹ 7,48,267.98
Jun-2021	₹ 1,75,495.34	3117.78	₹ 1,72,377.55	₹ 5,75,890.43
Jul-2021	₹ 1,75,495.34	2399.54	₹ 1,73,095.79	₹ 4,02,794.63
Aug-2021	₹ 1,75,495.34	1678.31	₹ 1,73,817.03	₹ 2,28,977.61
Sep-2021	₹ 1,75,495.34	954.07	₹ 1,74,541.26	₹ 54,436.34
Oct-2021	₹ 1,75,495.34	226.82	₹ 1,75,268.52	₹ 0.00

#### Interpretation of the Example:

- In Case Table 1, it is observed that when the borrower does not opt for the moratorium, they pay back the loan by easy monthly instalments from the beginning. The borrower can meet his dues by March 2020. The total interest paid by the borrower is 55,945.
- However, in Case Table 2, it is observed that as the borrower opts for the moratorium, the total interest accumulates at a future date, and hence the liabilities increase. Therefore, the borrower can pay off his loans by October 2021. The total interest paid by the borrower is 1,10,607.

#### Key Takeaways from the Case Example

- Opting for the moratorium can lead to future repercussions since the total interest due is more when the borrower applies for the loan moratorium compared to a borrower who has not applied for the same. In the above case, both the interest rates had a difference of 54663.
- It is taking an additional 7 months for the applicant to repay their liabilities.
- To catch up with the dues, the applicant must ensure that they generate enough future cash flows to repay their debts. They can calculate this by ensuring if they have enough revenue generating assets.

## II REVIEW OF LITERATURE

Dr. Meena Mehta and Rishab Kaul (2021) asserted the fact that the moratorium policy was not a nascent concept and was implemented in several countries within and outside India as well. Countries like Japan, Greece, Thailand, and USA had adopted the moratorium policy to tackle previous financial crisis in the nineteenth century. The latest one being in Japan during the 2008 economic crisis, they offered the moratorium for small businesses, but it resulted in a failure since it was extended for a very long time.

Shri Mahadev.B. Bagadi (2019) mentioned the role of policy making by the RBI to solve the ongoing Non-Performing Assets crisis. The paper describes the consequences of NPAs which could affect the operational efficiencies of various businesses, reduction in net interest income of banks, unstable profitability, and increased pressure to maintain sufficient credit and deposit flows in the economy. The GNPA is one of the major indicators of determining NPAs and it can be used for analyses on a yearly basis.

Manisha Dey (2020) analyzed both the positive and negative aspects of the RBI moratorium, suggesting that the micro, small and medium, which plays a huge role in economic growth, would find it difficult to attain a loan since they had to meet asset quality requirements. The positive aspect was that the financial institutions could ease of their financial stress of maintaining net stable funding ratio norms. This would have impacted the credit and deposit behavior of the banks.

Manisha Dey and Wang Juan (2020) suggested that scheduled commercial banks (SCBs) should focus on tackling financial stress by managing NPAs, reducing slippage ratios, and mitigating operational risk. They analyzed the Report on Trend and Progress of Banking by RBI (2019-20) and found out the adjustment of Liquidity Adjustment Rates (LAF). They observed that the RBI has adjusted the repo and reverse repo rates to increase liquidity in the economy. Working capital interest was relaxed to ensure businesses had sufficient cash flows to operate effectively during the pandemic. The Net Stable Funding ratio was relaxed as well, and the requirement was deferred to 1st October 2020 (RBI 2021).

Palak Lohia (2020) has mentioned that the COVID-19 RBI moratorium was not a mere loan waiver but rather a relaxation given to companies which needed the moratorium. The paper had several cases a firm could vouch for that same. The study revealed that it was not practically possible for any bank to have no NPA. Public Sector Banks had higher numbers of NPAs compared to private sector banks. Per the report, it is impossible for any bank to have no nonperforming assets. In comparison to private sector banks, public sector banks had a higher number of nonperforming assets (NPAs).

Kapil Kumar Tiwari, Dr. Rashmi Somani and Insha Mohammed (2020) in their paper mentioned that the application of the moratorium will not impact the credit rating scores of the companies. It will be mentioned as a moratorium availed facility. However, failing to comply with the repayment after the moratorium can negatively impact their credit ratings. The moratorium's implementation would have no impact on the companies' credit ratings. It will be noted as a moratorium that has been used. Failure to repay after the moratorium would, however, have a negative effect on their credit scores.

Dr. M Somasundaram (2020) in his paper, The Merits and Demerits of RBI moratorium, it was mentioned that the fund flow will be affected since 32% of the borrowers had availed the RBI moratorium facility. He suggested that customers with sufficient credit should not apply for the moratorium, since it involved paying EMIs in the future. The RBI must not extend the moratorium to a further date.

Animesh Bhattacharjee, Madhu Kumari and Joy Das (2020) in their paper investigated the Impact of the Announcement of Loan Moratorium: Evidence from Indian Public Sector Banks, investigated the impact of the three-month moratorium announcement impact on the equity stock returns. The estimation period was taken to be 120 stock trading days while the event window was 21 stock trading days. The market model used was the single index model which was proposed by Fama in his book Foundations of Finance. The study suggested that the market indeed responded to the news related to the liquidity infusion by the Reserve Bank of India, falling global indices and the development of the COVID-19 vaccine. The adjustment in the bank stock prices occurred before the announcement of the three months' loan moratorium. The average annual return on day was significantly related.

Dr. Binoy Joy and Dr. Mrutyunjay Sisugoswami (2020) in their paper, mentioned about the conversion of non-performing assets and supporting economic growth, and studied the determination of a stressed financial asset, raising potential losses for not making enough provisions to combat NPAs in the Indian Banking Sector. They suggested that there should be robust policies to curb the NPA insolvencies and thus it can help the economy to revive in the long run. It is noticed that they have specifically mentioned that public sector banks are the primary drivers of NPAs in India. Many reasons have also been put to support this statement. Public Sector Banks (PSBs), improper evaluation of at the appraisal stage of the borrowing process, irregular monitoring of loans, less rights offered to creditors and deficiencies in the recovery process have significantly contributed to the rise of NPAs in India.

### III RESEARCH OBJECTIVES

- To analyze the impact of moratorium through credit flows and deposit flows and performance indicators of banks in India
- To assess the operating effectiveness of the moratorium policy on companies which have applied for the moratorium
- To suggest better policies to solve problems of insolvency of companies during black swan events like Covid-19.

### IV RESEARCH METHODOLOGY

This paper focuses on two aspects, the operating efficiencies of the companies, and the quarterly reports of the banking sector of India, to analyse banking performance during the moratorium period. The time-period taken in the study is the time before and after moratorium period which is from March 2019 to September 2020. For the company performance analysis, a list of 42 companies were selected and their average operating profit was calculated from their quarterly financial statements. The rationale for choosing average operating profit was to measure its operating efficiency. For bank performance measurement, the implementation of the moratorium in the economy was a major factor in determining the impact of credit flows and deposit flows in a bank. Hence, those will be used to analyse the relationship between its profit growth rate, Net Interest Margin (NIM), Return on Assets (ROA), Return on Equity (ROE), Cost of funds (COF), and Yield on Assets (YOA). The rationale for choosing these indicators is that they measure the overall financial stability and health of banks. Interest being the prime source of income for banks, the Net Interest Margin was used to determine the actual earnings with respect to various credit flows and deposit flows. Return on Assets was used to determine the bank's profitability, Return on Equity was used to measure actual return to equity shareholders, Cost of funds implies the cost incurred to maintain its capital and Yield on assets was to determine its solvency

### V PROBLEM STATEMENT

The RBI has implemented the moratorium policy to postpone repayment of debts by companies in the MSME sector which were affected during the pandemic. The problem which this paper will address is whether this policy has impacted the company and banking performance. The importance of assessing this problem is to formulate better policies to manage debt repayment during black swan events like COVID-19. The policies must focus on the key indicators which can create a huge significance. The paper aims to find out a better and more effective policies which can revive the economy.

### VI SCOPE OF THE STUDY

The study aims to identify the impact of the RBI moratorium on the performance of company and banks. For company analysis, 42 publicly listed companies which had applied for the moratorium and 43 competitors of the same industry, which did not apply for the same, were taken for the study. For banking performance, the data was collected from the Financial Stability Report (January 2021). The sample size includes all the SCBs (44) in India. The duration of the study is from March 2019, i.e., before the moratorium period from September 2020 i.e., after the moratorium period. The topics discussed in the paper are related to financial macro-economic indicators and relationship between performance indicators. The geographical location of the study is India.

### VII VARIABLES USED FOR THE STUDY

For Dataset 1: To analyze the impact of RBI moratorium policy on the average operating profit of companies.

Dependent Variable: Impact of the moratorium

Independent Variables:

- Managerial decision of applying for the moratorium.
- Managerial decision of not applying for the moratorium

For Dataset 2: To assess the impact of credit flows and deposit flows on banking performance during the moratorium period

Dependent Variables:

- Credit flows of all Scheduled Commercial Banks (SCBs).
- Deposit flows of all Scheduled Commercial Banks (SCBs)

Independent Variables:

- Profit Growth of all SCBs
- Net Interest Margin of all SCBs
- Return on Assets (ROA) of all SCBs
- Return on Equity

## Meaning of The Variables

### For Company Performance Analysis:

- Impact of moratorium: This refers to the managerial decision of applying for the moratorium
- Decision to apply: The companies which have applied
- Decision not to apply: The peers of the companies under similar circumstances which have not applied for the moratorium
- Average Operating Profit has been taken of all the companies and the relationship between average operating profit and decision to apply has been determined.

### For Banking Performance Analysis:

- Credit flows: It represents the total of all the credit flows out of the bank loans provided to borrowers.
- Deposit flows: It represents the sum of all the deposits by customers in savings accounts, current accounts, fixed deposits, and recurring deposit accounts.
- Profit growth: It refers to the income generated by all the SCBs in India
- Net Interest Margin: It refers to the total interest income earned by SCBs in India. It is calculated by taking the difference between interest earned and interest paid.
- Return on Assets: Indicates the profitability of the firm in relation to the total number of assets the firm has on its balance sheet.
- Return on Equity: Financial measure of both profitability and efficiency. It has calculated by dividing net income by total shareholders' equity.

## VIII HYPOTHESIS TESTING

### For Company Performance Analysis

H0: There is no significant difference between the decision to apply and not to apply for the moratorium

H1: There is a significant difference between the decision to apply and not to apply for the moratorium

### For Banking Performance Analysis

Round 1: Where dependent variable is Credit flow of all SCBs, and performance ratios are independent variables

H0: There is no relationship between quarterly credit flows and banking performance indicators

H1: There is a relationship between quarterly credit flows and banking performance indicators

Round 2: Where dependent variable is Deposit flow of all SCBs, and performance ratios are independent variables

H0: There is no relationship between quarterly deposit flows and banking performance indicators

H1: There is a relationship between quarterly deposit flows and banking performance indicators

## IX METHOD OF DATA COLLECTION

Secondary data was collected for the study. For Company Analysis, quarterly financial reports of each company were collected to assess average operating profits. For Banking Performance Analysis, the data was collected from the Financial Stability Report of publish on 11th January 2021 from The Reserve Bank of India website. SPSS software by IBM was used to conduct the data tests.

### For Company Performance Analysis

The Investment Information Credit Rating Agency (ICRA) had released the list of companies which had applied for the moratorium. There were 326 companies. Out of the list, there were 42 companies which were listed on the National Stock Exchange and the Bombay Stock Exchange. The data was collected from the quarterly reports of the 42 publicly listed companies. Only the quarterly operational profits were collected of each company. Z-test to assess the normality of the data. Since the data was not normally distributed, Mann-Whitney test was used. Regression Analysis to determine the impact of the dependent variable (RBI moratorium). Time period of the study is from December 2019 to March 2020.

### For Bank's Performance Analysis

Sample size: 44 Scheduled Commercial Banks in India. Statistical tools used were Regression analysis to determine the impact of credit flows and deposit flows of all SCBs (dependent variables) on Profit Growth, Net Income Margin, Return on Assets, Return on Equity, Cost of funds, Yield on Assets (independent variables) Correlation analysis to determine the relationship between of credit flows and deposit flows of all SCBs on Profit Growth, Net Income Margin, Return on Assets, Return on Equity, Cost of funds, Yield on Assets. Time of the study is from March 2019 to September 2020.

## X LIMITATIONS OF THE STUDY

For Company Analysis: The peers (companies which have not applied for the moratorium) chosen for company analysis has been assumed to be in similar debt conditions. Operating profits is assumed to be the only parameter to determine operating efficiency. For

Banking Performance Analysis: The data available by RBI has the sum of all the SCBs. Hence individual bank performance cannot be analyzed. At the time of the study, it is very early to determine if the moratorium has created a significant impact or not.

## XI DATA ANALYSIS

For Company Performance Analysis

Table 1: Descriptive Statistics of Company Analysis Dataset

Variable	Group			Statistic	Standard Error
Average Operating Profits	Without Moratorium	Mean		323.48	148.72
		95% Confidence Interval for Mean	Lower Bound	23.33	
			Upper Bound	623.63	
		5% Trimmed Mean		142.47	
		Median		31	
		Variance		951182.44	
		Std. Deviation		975.28	
		Minimum		-162	
		Maximum		4741	
		Range		4903	
		Interquartile Range		110	
		Skewness		3.65	0.36
	Kurtosis		12.92	0.7	
	With Moratorium	Mean		257.35	111.15
		95% Confidence Interval for Mean	Lower Bound	32.87	
			Upper Bound	481.84	
		5% Trimmed Mean		136.08	
		Median		30.5	
		Variance		518934.91	
		Std. Deviation		720.37	
		Minimum		-476	
		Maximum		3403	
Range			3879		
Interquartile Range		76.75			
Skewness		3.27	0.36		
Kurtosis		10.84	0.71		

Table 2: Descriptive Statistics of Company Analysis Dataset

Variable	Number of Observations	Mean	Std. Deviation	Minimum	Maximum
Average Operating Profit	85	290.81	854.39	-476	4741
Group	85	0.49	0.5	0	1

Table 3: Tests of Normality for Company Analysis Dataset

Particulars	Kolmogorov-Smirnova			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Moratorium Not Applied	0.397	43	0	0.389	43	0
Moratorium Applied	0.385	42	0	0.466	42	0

a. Lilliefors Significance Correction

Interpretation: The tables show us that the input is not normally distributed. Hence Mann-Whitney Test shall be used.

Table 4: Mann-Whitney Test

Group		No. of Observations	Mean Rank	Sum of Ranks
Average Operating Profit	Moratorium Not Applied	43	42.28	1818.00
	Moratorium Applied	42	43.74	1837.00
	Total	85		

Table 5: Mann-Whitney Test Statistics

	Average Operating Profit
Mann-Whitney U	872.00
Wilcoxon W	1818.00
Z	-0.27
Sig. (2-tailed)	0.78

a. Grouping Variable: Group

Interpretation: Since the significance value is  $0.785 > 0.05$  accept the null hypothesis that there is no significant relationship. The z value is negative at -0.273. The negative value states that the companies which had applied for moratorium has a higher average operating profit compared to the companies which have not applied. However, from the significance value, there is no significant difference between the average operating profit and RBI moratorium application. Hence accept null hypothesis  $H_0$ .  
For Banking Performance Analysis

Table 6: Descriptive Statistics of Credit Flow Rates with Banking Performance Indicators

Variables	Minimum	Maximum	Mean	Standard Deviation
Credit Flow Rates of all SCBs	5.8	14.2	9.3	4
Net Interest Income	11.4	18.8	14.5	3.5
Other Operating Income	-5.2	26.7	11.3	15.6
Operating Expenses	4.1	12.2	9.9	3.9
Earnings Before Provisions and Taxes	3.8	23.2	15.8	8.3
Provisions	-15.6	2.3	-3.6	8.2
Net Interest Margin	2.7	3.1	2.8	0.1
Return on Assets	-0.1	0.7	0.2	0.3
Return on Equity	-1.5	8.1	2.6	4
Cost of Funds	4.9	5.3	5.1	0.1
Yield on Assets	7.9	8.1	8	0

Table 7: Regression analysis: Where Credit Flow Rates is the dependent variable

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
(Constant)	-230.22	0	
Earnings Before	-0.42	0	-0.87
Return on Equity	0.05	0	0.056
Yield on Assets	30.76	0	0.615

a. Dependent Variable: Credit Flow Rates of all SCBs

Accept  $H_1$  for SCB's EBPT, Return on Equity and Yield on Assets.

Interpretation: When the dependent variable is Credit Flow Rates of all SCBs, it has a negative relationship with Earnings before provisions and taxes at -0.425. This means when Credit Flow Rates are increasing, the EBPT of the banks are decreasing. It can be inferred that the banks are not getting back the interest income from the loans they are lending to borrow (NPAs).

Credit Flow Rates and Return on Equity are positively related. This means that when the credit flow banks are increasing, the profit generation is also increasing. However, there is a small impact at the value of 0.056. Credit Flow Rates and yield on assets have a strong positive relationship at 30.765. This means there is a significant impact of Credit Flow Rates on the yield on assets of scheduled commercial banks. It can be inferred that with the rise of Indian Bank's the earnings on the assets, lenders borrow more credit from SCBs in India.

Table 8: Correlation Analysis Between Credit Flow Rates and Banking Performance Indicators

Variables	Credit Flow Rates of all SCBs	Net Interest Income	Other Operating Income	Operating Expenses	Earnings Before Provision and Taxes	Provisions	Net Interest Margin	Return on Assets	Return on Equity	Cost of Funds	Yield on Assets
Credit Flow Rates of all SCBs	1	0.455	-0.383	0.605	-0.811	-0.506	-0.728	-0.674	-0.67	0.586	0.539
Net Interest Income	0.455	1	-0.989*	-0.262	-0.884	0.318	0.038	-0.075	-0.101	-0.415	-0.503
Other Operating Income	-0.383	-0.989*	1	0.386	0.829	-0.293	-0.169	-0.068	-0.042	0.51	0.555
Operating Expenses	0.605	-0.262	0.386	1	-0.188	-0.363	-0.974*	-0.924	-0.91	0.955*	0.802
Earnings Before Provisions and Taxes	-0.811	-0.884	0.829	-0.188	1	0.002	0.399	0.457	0.473	-0.056	0.054
Provisions	-0.506	0.318	-0.293	-0.363	0.002	1	0.292	0.083	0.053	-0.606	-0.826
Net Interest Margin	-0.728	0.038	-0.169	-0.974*	0.399	0.292	1	0.976*	0.969*	-0.889	-0.707
Return on Assets	-0.674	-0.075	-0.068	-0.924	0.457	0.083	0.976*	1	0.999**	-0.778	-0.54
Return on Equity	-0.67	-0.101	-0.042	-0.91	0.473	0.053	0.969*	0.999**	1	-0.756	-0.511
Cost of Funds	0.586	-0.415	0.51	0.955*	-0.056	-0.606	-0.889	-0.778	-0.756	1	0.943
Yield on Assets	0.539	-0.503	0.555	0.802	0.054	-0.826	-0.707	-0.54	-0.511	0.943	1

Interpretation: Credit Flow Rates and SCB's other operating income are negatively correlated. This means most of the credit borrowers are turning into NPAs and are unable to pay back their dues on time. Profit Growth and Net Interest margin are strongly positively related. This means Net Interest Margin is an important component of Profit Growth in Banks. Cost of Procuring funds and Operating expenses are highly correlated at 0.05 level (2 tailed). This means to improve operating efficiency; the banks must lower their cost of capital i.e., select the cheapest source of funds.

Table 9: Deposit Flow Rates with Banking Performance Indicators

Variables	Mean	Standard Deviation
Deposit Flow Rates	6.12	2.45
Net Interest Income	14.55	3.57
Other Operating Income	11.30	15.67
Operating Expenses	9.97	3.92
Earnings Before Provisions and Taxes	15.82	8.37
Provisions	-3.62	8.20
Net Interest Margin	2.85	0.17
Return on Assets	0.23	0.34
Return on Equity	2.65	4.07
Cost of Funds	5.15	0.17
Yield on Assets	8	0.08

Regression Analysis: Where Deposit flow is the dependent variable



Table 10: Coefficients when Dependent Variable is Deposit Flow Rates

Model	Unstandardized Coefficients		Standardized Coefficients
	B	Std. Error	Beta
(Constant)	162.31	0	
Earnings Before Provisions and Taxes	0.05	0	0.18
Return on Equity	0.25	0	0.42
Yield on Assets	-19.71	0	-0.65
a. Dependent Variable: Deposit Flow Rates			

Accept H1 for SCB's EBPT, Return on Equity and Yield on Assets.

Interpretation: Deposit Flow Rates have less to no impact on the profit growth rate of banks at the value of 0.054. Deposit Flow Rates have a positive relationship with Return on Equity at 0.258. It can be inferred that when return on equity also increases, deposit flow by customers increases and yield on assets are negatively related at -19.716. This means when yield on assets decreases, customers reduce their deposits in banks.

Table 11: Correlation Analysis Between Deposit Flow Rates with Banking Performance Indicators

Variables	Deposit Flow Rates	Net Interest Income	Other Operating Income	Operating Expenses	Earnings Before Provisions and Taxes	Provisions	Return on Assets	Return on Equity	Cost of Funds	Yield on Assets
Deposit Flow Rates	1	0.123	-0.229	-0.952	0.353	0.566	0.868	0.852	-0.954	-0.866
Net Interest Income	0.123	1	-0.989	-0.262	-0.884	0.318	-0.075	-0.101	-0.415	-0.503
Other Operating Income	-0.229	-0.989	1	0.386	0.829	-0.293	-0.068	-0.042	0.51	0.555
Operating Expenses	-0.952	-0.262	0.386	1	-0.188	-0.363	-0.924	-0.91	0.955	0.802
Earnings Before Provisions and Taxes	0.353	-0.884	0.829	-0.188	1	0.002	0.457	0.473	-0.056	0.054
Provisions	0.566	0.318	-0.293	-0.363	0.002	1	0.083	0.053	-0.606	-0.826
Net Interest Margin	0.954	0.038	-0.169	-0.974	0.399	0.292	0.976	0.969	-0.889	-0.707
Return on Assets	0.868	-0.075	-0.068	-0.924	0.457	0.083	1	0.999	-0.778	-0.54
Return on Equity	0.852	-0.101	-0.042	-0.91	0.473	0.053	0.999	1	-0.756	-0.511
Cost of Funds	-0.954	-0.415	0.51	0.955	-0.056	-0.606	-0.778	-0.756	1	0.943
Yield on Assets	-0.866	-0.503	0.555	0.802	0.054	-0.826	-0.54	-0.511	0.943	1
Deposit Flow Rates	.	0.439	0.386	0.024	0.323	0.217	0.066	0.074	0.023	0.067
Net Interest Income	0.439	.	0.005	0.369	0.058	0.341	0.463	0.449	0.293	0.249
Other Operating Income	0.386	0.005	.	0.307	0.086	0.353	0.466	0.479	0.245	0.223
Operating Expenses	0.024	0.369	0.307	.	0.406	0.318	0.038	0.045	0.023	0.099
Earnings Before Provisions and Taxes	0.323	0.058	0.086	0.406	.	0.499	0.272	0.263	0.472	0.473
Provisions	0.217	0.341	0.353	0.318	0.499	.	0.459	0.473	0.197	0.087
Net Interest Margin	0.023	0.481	0.415	0.013	0.301	0.354	0.012	0.016	0.056	0.146
Return on Assets	0.066	0.463	0.466	0.038	0.272	0.459	.	0	0.111	0.23
Return on Equity	0.074	0.449	0.479	0.045	0.263	0.473	0		0.122	0.244

Interpretation: Net Interest Margin and Deposit Flow Rates are positively correlated 0.954. Therefore, when customers deposit more, the Net Interest Margin increases due to a large amount of capital which can be invested for further income. Deposit Flow

Rates and operating expenses are negatively correlated at 0.955. This means when customers are increasing their deposits, banks operating expenses decreases and vice versa. Return on Equity and Return on Assets have a direct relationship at 0.999.

## XII RESULTS AND DISCUSSION

Company performance analysis during the moratorium period

- The decision to apply for the moratorium had less to no significant impact on the quarterly average operating profits on the businesses.
- Companies must only apply for the moratorium when they need to. The managerial decision of applying for the moratorium will not significantly impact the operating performance of the firm.
- Furthermore, the moratorium could lead the company to pay a hefty interest in the end. The firm will have to ensure it generates sufficient cash flows in the end.

Banking performance analysis during the moratorium period.

- Since the extension of the moratorium period has affected the credit and deposit behaviour of the economy, Credit Flow Rates and Deposit Flow Rates were taken under consideration:
- The Credit Flow Rates of the banks in the study have an inverse relationship with its Earnings before provisions and taxes (EBPT). It can be inferred that the banks are not getting back the interest income from the loans they are lending to borrow (NPAs).
- With the rise of the earnings on the assets, lenders tend to borrow more credit from banks.
- Net Interest Margin is one of the major drivers of Profit Growth in Banks.
- To improve operating efficiency, the banks must select the cheapest source of funds to reduce their overall cost of capital. With the return on equity increase, customers tend to deposit more in banks.
- When yield on assets decreases, customers reduce their deposits in banks.
- When customers deposit more, the Net Interest Margin increases due to a large amount of capital which can be invested for further income.
- Customers tend to deposit more in their bank accounts when the Net Interest Margin increases. Due to a large amount of available capital, banks invest it to increase their income.

From the study, it was found that there was less to no significant impact on the quarterly average operating profits. This meant that the moratorium was not impactful when it came to operating efficiency. When it comes to banking performance, the moratorium has not completely solved the NPA crisis in India. However, it has decreased the credit flow rate since March 2019 (before the moratorium period) from 14.2% to 5.8% in September 2020 (after the moratorium period). The deposit flow rate has slightly increased and has significantly contributed to the performance of the banks in the study. The effect on quarterly average operating income was found to be minor to non-existent. The moratorium had little impact on operational efficiency because of this. In terms of bank results, the moratorium has not fully solved India's NPA crisis. It has, however, reduced the creditflow rate from 14.2 percent in March 2019 (prior to the moratorium period) to 5.8 percent in September 2020. (after the moratorium period). The deposit flow rate has increased slightly and has made a major contribution to the banks' success in the report. The RBI moratorium policy was implemented with an intension to help business to delay their debt dues without affecting their credit rating. However, the condition was that they had to meet the asset quality standards and credit ratings. Due to these restrictions, the policy could not create a significant impact.

Recommendations to the Reserve Bank of India:

- The government should create a treasury reserve, or a disaster relief reserve, especially for black swan events like COVID-19.
- The RBI should focus on increasing liquidity in the markets by easing credit lending policies.

Recommendations to the Scheduled Commercial Banks:

- Banks should focus on improving their Net Interest Margin, since it is a major driver of profits.
- The polices should aim to improve returns on assets and equities so that investors increase their deposits, which can increase loan capital available for borrowers.

Recommendations to Companies:

- Companies must analyse their financial statements and leverage their solvency ratios to determine their credit risk taking capacity.
- Operating expenses must be controlled to improve operating incomes and efficacies by acquiring cheaper sources of raising capital.

To solve the Non-Performing Assets (NPA) Crisis:

- Improving the process of credit evaluation and the financial health evaluation of companies to determine credit lending policies.
- Speeding up the process by reducing legal formalities.
- Monitoring the firm's capacity and process of the usage of credit into projects.
- Controlling inflation by reducing government expenditure, to hedge against its future value.

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