

MEASUREMENT OF CORRELATIONS (NPA AND ROA) OF DIFFERENT BANKS AND TREND ANALYSIS OF NPAS IN INDIAN BANKS

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ABSTRACT

A Non-performing asset is a loan or advance for which the principal or interest payment remained long overdue over a period of 90 days. NPAs are point of no return as they do not generate any income, whereas, the banks are required to make provisions such as assets. The aim of this project is to analyze the non-performing assets, net NPAs and gross NPAs of 8 banks in India and to see the relation between net profit, net NPAs and gross NPAs. The annual reports for the period of 3 years from 2014-2015 to 2016-2017 of these banks have been used in this project. Correlation is used for the relation between net profit and net NPA. The result is that it is positive for private sector bank that is HDFC and negative for public sector banks and they are SBI, PNB, Union Bank, United Bank, UCO Bank, Bank of India and Bank of Baroda.

Key words: Reliability, Spiritual Intelligence, Validity, Work Performance.

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1. INTRODUCTION

For the management of billions of assets in the world, the banking system is a crucial component of the global economy. While money exchange may be as old as money, but the banking system dates back to 15th century medieval Italy and played a major role in the rise of the Italian states. Ever since, the health of an economy and the health of its banks have been interrelated. The number of banks in India in 1951 were the highest-566. In 1960, RBI was empowered to force the compulsory merger of the weak banks with the strong ones. This led to reduction in the number of banks to 89 in 1969. In 1980, the number of nationalized banks were

20. On the suggestions of the Narsimha Committee, the Banking Regulation Act was amended in 1993 and thus the gates on new private banks were opened. Banking system performs different functions, depending on the network of institutions. For example, payment and loan functions at commercial banks allow people to deposit funds and use checking accounts and debit cards to pay bills. Central banks distribute currency and establish money-related policies. One big cause of concern for the banking industry is growing NPAs. Loans don't go bad right away. Most banks allow customers a certain grace period. After a certain number of days, the loan is classified as non-performing. A bank will try to recoup its money by foreclosing on the property that secures a loan. This is a highly contentious issue not just with banks but also Micro-finance institutions. This project analyses the two types* of NPAs- Gross NPAs and Net NPAs and Net Profit and it is done using the annual reports of 2014-2015 to 2016-2017. Correlation is used to find the relation between net profit and net NPA. Also trend of the given years for Gross NPA and Net NPA is analyzed. Overall result shows that both the Gross NPAs and Net NPAs have increased during the given time period. The correlation between Gross NPA and Net NPA is negative for all public sector banks whereas it is positive for private sector bank.

2. LITERATURE REVIEW

The issue of NPAs is not a recent issue and a number of studies have been conducted to analyze real time scenario in the Indian economy.

Vivek Rajbahadur Singh in A Study of Non-Performing Assets of Commercial Banks and its recovery in India, status of Non-Performing Assets and of Indian Scheduled Commercial Banks and their impact on banks have been studied. Suggestions to avoid future NPAs and recovering the existing NPAs through various channels have been given. They have considered NPAs in Scheduled Commercial Banks which includes public sector, private sector and foreign banks which are listed in the Second Schedule of the Reserve Bank of India Act, 1934.

Dr. Sonia Narula and Monika Singla in Empirical Study on Non-Performing Assets of Bank have assessed the non-performing assets of Punjab National Bank and the impact on profitability and the relation between total advance, net profit, gross & net NPA. The study uses the annual reports of Punjab National Bank for the period of six years from 2006-07 to 2011-12.

Mayur Rao and Ankita Patel in A Study on Non-Performing Assets Management With Reference to Public Sector Banks, Private Sector Banks and Foreign Banks in India have considered the aggregate data of public sector, private sector and foreign banks and have compared, analyzed and interpreted the NPA management from the year 2009-2013. It is revealed that the percentage of Gross NPA to Gross Advances is increasing for the public banks, ratio of Loss Advances to Gross Advances are higher in foreign banks, the estimated Gross NPA for 2014 is more for public banks as compared to private banks and foreign banks and from the ANOVA test, it is concluded that ratio of Gross NPA to Gross Advances for public sector, private sector and foreign banks does have significant difference between 2009 to 2013.

Lavina and Kulbir Singh Guleria in A Study of Non-Performing Assets of Public Sector Banks in India have worked on NPA problems, understanding the magnitude and causes of NPA problem and its effect on economy. Conclusions have been drawn as to what should be done to improve the situation of increasing NPAs in the economy.

Srinivas K T in A Study on Non-Performing Assets of Commercial Banks in India have studied the reasons for advances becoming NPA in the Indian commercial banking sector and have given suitable suggestion to overcome the mentioned problem. This study is confined and restricted to the boundary of commercial banks and data is analyzed from 1996-97 to 2011-12.

3. OBJECTIVES OF THE STUDY

Two questions were identified to guide the study:

- To analyze whether SISRI is a valid measure of spiritual intelligence in the Indian scenario.
- To identify the relationship, if any, between spiritual intelligence and the organisational outcome variable – work performance.

4. THEORY

A Non-Performing Asset refers to a classification for loans on the books of financial institutions that are in default or are in arrears of scheduled payments of principal or interest. In most cases, debt is classified as non-performing when loan payments have not been made for a period of 90 days. While 90 days of nonpayment is the standard period of time for a debt to be categorized as non-performing, the amount of elapsed time may be shorter or longer depending on the terms and conditions set forth in each loan. There are many reasons which led to NPA growth in India. Time period 2000-2007 was a period of economic boom. Indian economy along with the world was going leap and bound during this time. To sustain this economic growth, large amount of money was pumped in the energy and infrastructure sector. But these sectors have long gestation period. With the advent of 2008 financial crisis, economies around the world slowed down. India too did not remain untouched. This economic slowdown adversely affected those long gestation periods thus started defaulting. Government slow response and red tapism have also aggravated the problem. Profitable projects due to the passage of time and growing cost became infeasible and defaulted on loans. Political interference and nepotism have also added to the NPAs. Political pressures were misused for getting loans without proper paper work. Priority sector lending and loan waiver (mainly to farmers) have also added to the menace. The government has over the years enacted and tweaked stringent rules to recover assets of defaulters. The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act or SARFAESI ACT 2002 was implemented in 2016. Experts have pointed out that the NPA problem has to be tackled before the time a company starts defaulting. This needs a risk assessment by the lenders and red-flagging the early signs of a possible default.

RBI has over the past few decades come up with a number of schemes such as corporate debt restructuring(CDR), formation of joint lenders' forum(JLF), flexible structuring for long term project loans to infrastructure (or 5/25 scheme), strategic debt restructuring(SDR) scheme and sustainable structuring of stressed assets (S4A) to check the menace of NPAs. In many cases the companies have failed to make profits and defaulted even after their loans were restructured.

The government is set to promulgate an Ordinance to help banks tackle the menace of mounting bad loans, which is denting profits of lenders, slowing credit flow to industry and hurting the economy. The cabinet approved promulgation of an ordinance to amend the Banking Regulation Act to speed up recovery of bad loans. The move comes after clarion calls from lenders who have been jostling with stressed assets mounting to about Rupees 10 lakh crore or close to 7% of India's GDP, as of December,2016 end. The Banking Regulation Act may be amended to give RBI more powers to monitor bank accounts of big defaulters. The amendment in the banking law will enable setting up of a committee to oversee companies that have been the biggest defaulters of loans. Emboldened by the Banking Regulation Amendment (Ordinance), the Reserve Bank of India is expected to push for resolution of bad loans worth about rupees 8 lakh crore by March 2019, a move that could bring down the non-performing assets and improve the financial health of banks, a study by ASSOCHAM said. Although entire NPAs could be put on the altar of Insolvency and Bankruptcy Code (IBC) resolution mechanism, it has to be seen how much and how fast they actually go out from the balance sheets of banks which at this point of time seem very stressed.

Present NPA Scenario: According to the latest information collated by the government, stressed assets which includes both non-performing assets as well as restructured loans of banks stood at Rupees 9.64 lakh crore as on December 31, 2016. In December, RBI's financial stability report said the gross non-performing advances (GNPAs) ratio of all banks increased to 9.1% by September 2016 from 7.8% in March 2016. RBI's stress test of the banking sector indicated that GNPA ratio may increase from 9.1% in September 2016 to 9.8% March 2017 and further to 10.1% by March 2018. PSU Banks are worst hit as their GNPA may increase to 12.5% by March 2017 and then to 12.9% in March 2018, from 11.8% in September 2016.

5. ABOUT THIS PROJECT

This project was started with the aim to study the present situation of non-performing assets in India. For this objective, data of 3 consecutive financial years was considered to make a comparison of the various banks of the industry in the country. Method of correlation is used to find relation between net NPAs and net profit. Also a trend analysis is done for the gross NPAs. The result comes out to be positive correlation for private sector bank i.e. HDFC bank and negative for public sector banks – SBI, PNB, Union bank, United bank, UCO bank, Bank of India and Bank of Baroda. Gross NPAs are continuously increasing for all the banks during the given period. There are many reasons for this encumbrance as have been stated above. Now the government is looking for the solutions to get the banking industry out of it. There are some ways in which both the government and RBI can speed up the NPA recovery process.

1. Banking Regulation Act: It may be amended to give RBI more powers to monitor bank accounts of big defaulters. RBI wants stricter rules for joint lenders' forum (JLF) and oversight committee (OC) to curb NPAs.
2. Stringent NPA recovery rules: The Securitization and Reconstruction of Financial Assets and Enforcement of Security Interest Act (SARFAESI) of 2002 was amended in 2016 as it took banks years to recover the assets.
3. RBI's loan restructuring schemes: There have been some schemes which RBI came up with during the past few decades such as Corporate Debt Restructuring (CDR), Formation of Joint Lenders' Forum (JLF), flexible structuring for long-term project loans to infrastructure (5/25 scheme), Strategic Debt Restructuring (SDR) scheme and sustainable structuring of stressed assets (S4A) to check the menace of NPAs.

6. RESULTS AND DISCUSSION

Table 1 SBI gross NPAs and net NPAs

Quarter /SBI	March '14	June '14	Sep '14	Dec '14	March '15	June '15	Sep '15	Dec '15	March '16	June '16	Sep '16	Dec '16
Gross NPA	61,605.35	60,434.24	60,712.38	61,991.45	56,725.34	56,430.77	56,834.28	72,791.73	98,172.8	100,541.18	105,782.96	108,172.32
Net NPA	31,096.07	31,883.80	32,997.16	34,468.74	27,590.58	28,669.14	28,591.96	40,249.12	55,807.02	57,420.98	60,013.45	61,430.45
%NET NPA	2.57	2.66	2.73	2.8	2.12	2.24	2.14	2.89	3.81	4.05	4.19	4.24
%gross NPA	4.95	4.9	4.89	4.9	4.25	4.29	4.15	5.1	6.5	6.94	7.14	7.23

Table 2 PNB gross NPAs and net NPAs

Quarter /PNB	March '14	June '14	Sep '14	Dec '14	March '15	June '15	Sep '15	Dec '15	March '16	June '16	Sep '16	Dec '16
Gross NPA	18,880.06	19,602.84	20,751.89	22,211.43	25,694.86	25,397.42	24,945.24	34,338.22	55,818.33	56,654.09	56,465.63	55,627.51
Net NPA	9,916.99	10,463.63	11,617.77	13,787.76	15,396.50	15,393.55	15,186.98	34,338.22	35,422.57	35,728.52	35,722.32	34,993.53
% NET NPA	2.85	3.02	3.22	3.82	4.06	4.05	3.99	5.86	8.61	9.16	9.1	9.09
% gross NPA	5.25	5.48	5.65	5.97	6.55	6.47	6.36	8.47	12.9	13.75	13.63	13.7

Measurement of Correlations (NPA and ROA) of Different Banks and Trend Analysis of NPAs In Indian Banks

Table 3 UNION bank gross NPAs and net NPAs

Quarter /Union Bank	March '14	June '14	Sep '14	Dec '14	March '15	June '15	Sep '15	Dec '15	March '16	June '16	Sep '16	Dec '16
Gross NPA	9,563.72	10,231.80	11,461.62	12,596.00	13,030.87	14,143.62	15,541.17	18,495.16	24,170.89	27,280.90	29,862.05	32,402.74
Net NPA	5,340.08	5,763.59	6,449.13	7,118.40	6,918.97	7,633.70	8,334.86	10,322.00	14,025.94	15,824.72	16,947.89	18,245.60
% NETNPA	2.33	2.46	2.71	2.95	2.71	3.08	3.39	4.07	5.25	6.16	6.39	6.95
% gross NPA	4.08	4.27	4.69	5.08	4.96	5.53	6.12	7.05	8.7	10.16	10.73	11.7

Table 4 UNITED bank gross NPAs and net NPAs

Quarter /United Bank	March '14	June '14	Sep '14	Dec '14	March '15	June '15	Sep '15	Dec '15	March '16	June '16	Sep '16	Dec '16
Gross NPA	7,118.01	7,097.44	7,074.69	7,809.38	6,552.91	6,532.82	6,112.21	6,721.53	9,471.01	10,116.13	11,134.47	10,845.31
Net NPA	4,664.11	4,666.54	4,486.24	5,240.32	4,081.38	4,091.20	3,677.37	3,965.13	6,110.71	6,579.28	7,185.23	6,729.89
% NETNPA	7.18	7.29	7.19	8.5	6.22	6.3	5.61	5.91	9.04	9.85	11.19	10.62
% gross NPA	10.47	10.43	10.78	12.03	9.49	9.57	8.9	9.57	13.26	14.29	16.26	15.98

Table 5 HDFC bank gross NPAs and net NPAs

Quarter /HDFC Bank	March '14	June '14	Sep '14	Dec '14	March '15	June '15	Sep '15	Dec '15	March '16	June '16	Sep '16	Dec '16
Gross NPA	2,989.28	3,356.22	3,361.65	3,467.91	3,438.38	3,652.23	3,827.77	4,255.20	4,392.83	4,920.89	5,069.04	5,232.27
Net NPA	820.03	1,007.42	917.34	908.66	896.28	1,027.70	1,037.68	1,260.60	1,320.37	1,493.39	1,488.85	1,564.32
% NETNPA	0.3	0.32	0.3	0.3	0.25	0.27	0.25	0.29	0.28	0.32	0.3	0.32
% gross NPA	1	1.07	1	1	0.93	0.95	0.91	0.97	0.94	1.04	1.02	1.05

Table 6 UCO bank gross NPAs and net NPAs

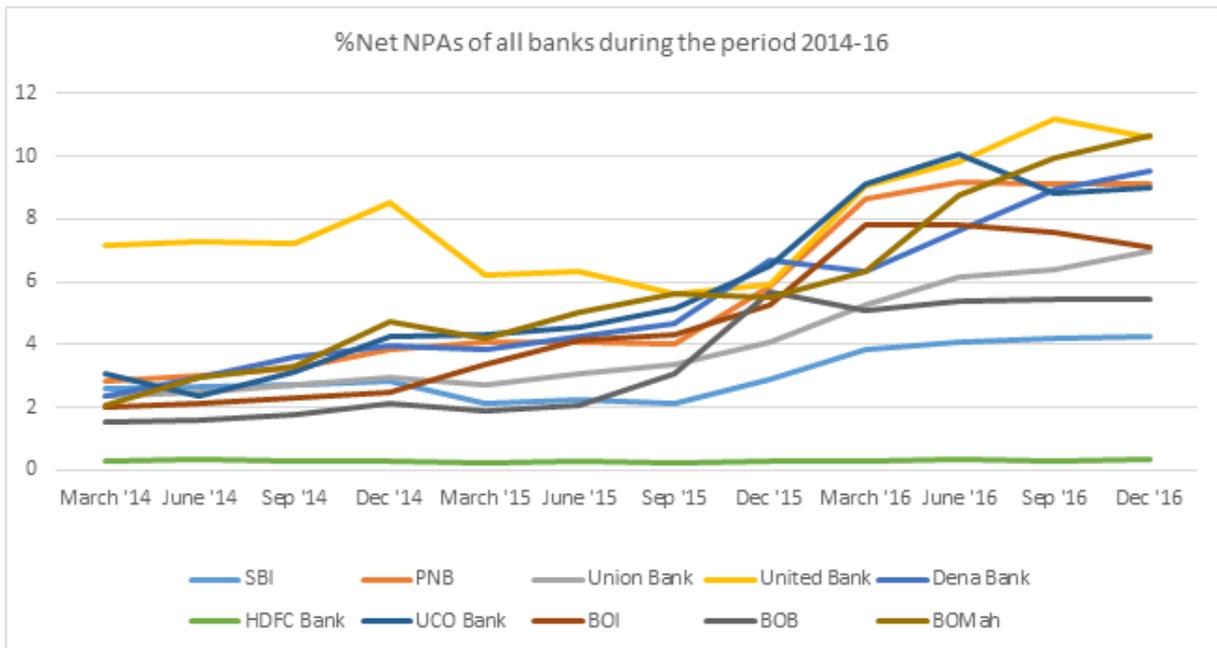
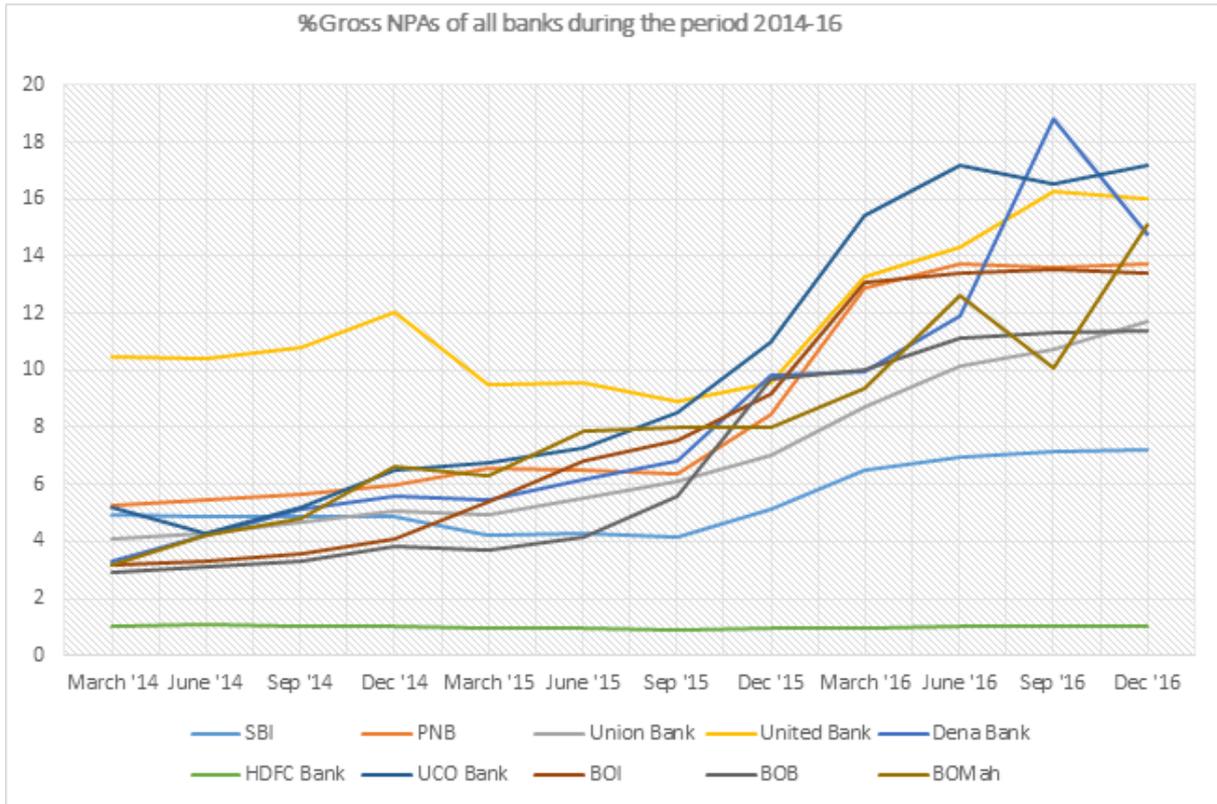
Quarter /UCO Bank	March '14	June '14	Sep '14	Dec '14	March '15	June '15	Sep '15	Dec '15	March '16	June '16	Sep '16	Dec '16
Gross NPA	7,353.30	6,346.32	7,446.64	9,530.63	10,265.05	10,894.41	12,226.66	14,931.80	20,907.73	22,597.70	22,275.51	22,181.26
Net NPA	7,353.30	3,344.02	4,388.66	6,051.46	6,330.58	6,541.13	7,123.11	8,409.50	11,443.59	12,127.44	10,890.43	10,544.98
% NET NPA	3.06	2.38	3.15	4.25	4.3	4.53	5.15	6.51	9.09	10.04	8.83	8.99
% gross NPA	5.2	4.31	5.2	6.5	6.76	7.3	8.51	10.98	15.43	17.19	16.51	17.18

Table 7 Bank of India gross NPAs and net NPAs

Quarter /BOI	March '14	June '14	Sep '14	Dec '14	March '15	June '15	Sep '15	Dec '15	March '16	June '16	Sep '16	Dec '16
Gross NPA	11,868.60	12,532.49	14,127.09	16,693.66	22,193.24	26,889.17	29,893.67	36,519.14	49,879.12	51,874.50	52,261.95	51,781.06
Net NPA	7,417.23	8,041.56	9,101.35	10,061.30	13,517.57	15,788.95	16,466.48	19,978.60	27,996.39	28,260.40	27,467.05	25,534.41
% NET NPA	2	2.14	2.32	2.5	3.36	4.11	4.31	5.25	7.79	7.78	7.56	7.09
% gross NPA	3.15	3.28	3.54	4.07	5.39	6.8	7.55	9.18	13.07	13.38	13.56	13.38

Table 8 Bank of Maharashtra gross NPAs and net NPAs

Quarter /BOMah	March '14	June '14	Sep '14	Dec '14	March '15	June '15	Sep '15	Dec '15	March '16	June '16	Sep '16	Dec '16
Gross NPA	2,839.85	3,761.29	4,350.62	6,186.66	6,402.06	7,574.86	7,986.34	8,301.62	13,039.63	14,433.90	15,417.65	17,188.71
Net NPA	1,807.32	2,563.19	2,901.45	4,265.44	4,126.57	4,708.11	5,442.46	5,595.73	8,609.44	9,713.13	10,358.92	11,229.56
% NET NPA	2.03	2.94	3.29	4.71	4.19	5.04	5.59	5.52	6.35	8.73	9.94	10.67
% gross NPA	3.16	4.23	4.83	6.65	6.33	7.86	7.98	7.97	9.34	12.64	10.08	15.08



Correlation between mean Net NPA and mean Net Profit for the 3 years of the following banks:

Bank	Mean Net Profit	Mean Net NPA	Correlation
SBI	11178.77333	47225.01333	-0.973360152
PNB	137.33	27840.39333	-0.797220093
Union Bank	1229.4833	13259.00333	-0.960548639
United Bank	64.51	5594.646667	-0.391981081
HDFC	12353.93667	1353.546667	0.999296929
UCO Bank	-1170.70667	9492.52	-0.995144046
BOI	-1979.543333	22273.00333	-0.904223744
BOB	-204.663333	15185.37667	-0.752137217

Interpretation of result: Since we have calculated the correlation for all the banks and as seen the correlation is positive only for one bank i.e. HDFC bank. It means that as net profit increases, net NPA also increases. It shows inaccuracy on the part of the bank because economic conditions alone are not responsible for the situation. The ever-greening of loans could be avoided by “not renewing loans”. This reasoning certainly points out the banks’ path towards NPAs has been a reason for the aggravation of bad loans. The correlation for all other banks is negative which shows that as Net Profit increases, net NPA decreases.

6. CONCLUSION

The aim of the project was to analyze the annual reports of 8 banks to see the situation of NPAs in the country. As we have done the study on Net NPAs, Net Profit and Gross NPAs, we have found out the correlation between Net NPAs and Net Profit. It is positive for HDFC Bank and is negative for all other banks. Gross NPAs and Net NPAs decreased in the year 2015 and increased in the year 2016 for banks SBI and United Bank while they increased by a significant percentage. Net Profit has decreased for all banks except for HDFC Bank for which the increase in gross profit has been consistent.

7. LIMITATIONS & FUTURE SCOPE

This research is based on secondary data. We just made the conclusion on the basis of analyzing the data collected through Annual reports of past years. The statistical concept used is limited and data very relevant to all the efforts of bank management and government of India is not undertaken in the study as the data is not out yet. The research scholars can further do the research on the topic related to impact aspect of this trend and as to what has different measures taken recently by the government affected the scenario, has the picture beginning to change further and does the management of banks like HDFC still getting to understand their operational risk exposure and other parametric risk increment to initiate mitigating strategy.

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