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A Frequency Assessment of Prevalent Prevention Strategies in order to Manage Banks' NPAs in MSME Loans

Dr Rupinder Katoch[1], Ms. Pooja Rani[2]
[1]Associate Professor, Lovely Professional University, Phagwara, Punjab, India
Corresponding Author
e-mail: rupinderkatoch@gmail.com
[2]Research Scholar, Lovely Professional University, Phagwara, Punjab, India
e-mail: pooja.mphil@gmail.com

Abstract— The vast amount of non-performing assets (NPAs) is a recurrent problem and a huge barrier to developing a successful banking sector. The MSME sector of the Indian economy is experiencing a worsening problem with delinquent assets. There has hardly been any systematic evaluation of tackling the problem in the context of loans sanctioned to MSMEs. Recent years have seen an increase in bad loans to micro, small, and medium businesses. Curative and preventive measures are both available to control non-performing assets (Meher et al., 2020). The study makes an effort to concentrate on the identification of numerous preventive methods for NPA management in the MSME sector in future. The primary data is related to the actual usage of *preventive* measures. The data was empirically evaluated using frequency analysis based on a survey of 316 bankers from 10 banks (5 from public and 5 from private sector). Therefore, the current study aims to shed light on the methods utilised to prevent NPAs in MMSEs while taking into account the viewpoint of the bankers who have had direct involvement in lending choices. The findings highlight the key methods for preventing NPAs which the banks must consider while making the necessary structural modifications to their mitigation measures.

Keywords- Non-performing Assets,Banker's Perception, MSME, Preventive practices.

I. INTRODUCTION

The growth engine of the Indian economy is the Micro, Small and Medium Enterprise sector. Since it generates the second-highest level of employment in the Indian economy after the agricultural sector, this industry is gradually becoming a key player (MSME Policy 2020-21). Because of its presence in even the most remote areas of India, it also gives the Indian economy a depth. They are required for generation of employment opportunities, Regional development, and Infrastructural development. On the other hand, this industry is susceptible to both local and worldwide market downturns (Chary and Rao 2016). Banks grant loans to MSMEs because of social objective such as priority sector lending (Kumar et al., 2016). But by providing loans to MSMEs, all Indian Banks are facing the problem of Nonperforming Assets due to the number of banker related, borrower related and economy related factors in the context of MSMEs. According to RBI data, on August 31, 2018, the loan book of some of India's top scheduled commercial banks (SCBs) had 48.3% corporate assets, Micro, small, and medium-sized enterprises (MSMEs), retail clients, and other parties make up the remaining 51.7%. (RBI, 2018). In the June 2019 quarter, 16% of all PSB MSME credit was NPAs nearly three times the rates in private banks and NBFCs (RBI, 2019). According to the U.K. Sinha report, this explains around 41% of all stressed loans in the MSME sector (livemint 2019). With the directive from RBI to increase lending to priority sectors like MSME, there is broad concern about the lowering of NPAs from MSME sectors on bank balance sheets, although there appears to be no consensus on the right course of action to take to address this issue.(RBI/FIDD/2019-20/70 Master Direction FIDD.CO.Plan.BC No.08/04.09.01/2019-20). Thus, the main difficulty the banking industry has is managing NPAs arising from MSMEs. Banks in the public and private sectors both are struggling with the NPA issue. According to the most recent NABARD data, Haryana has the highest NPA rating, at 50.1%, followed by Assam, Tripura, Meghalaya, and UP, which is a matter of worry. (NABARD Annual Report 2021). According to information provided by the Haryana State-Level Bankers' Committee in February 2018, the NPA amount under MSME advances as of December 2018 was Rs 4,412 crore, and by December 2019 it had increased by 9.1 percent to Rs 4,814 crore (State Level Bankers Committee, 2019).

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Table 1: Total NPAs under MSMEs Advances (2017-2022)
(.Rs. In Crore)

Name of Bank	March 2017	March 2018	March 2019	March 2020	March 2021	March 2022
	Amount	Amount	Amount	Amount	Amount	Amount
Bank of Baroda	70	70	85	149	217	202
Bank of India	395	233	170	182	260	291
Canara Bank	561	594	666	774	754	859
Punjab National Bank	599	971	793	1725	1333	1849
State Bank of India	295	1589	439	415	365	414
Axis Bank	20	53	50	50	47	82
HDFC Bank	93.71	93	91	136	99	258
ICICI Bank	100	60	136	178	337	180
Kotak Mahindra Bank	20	29	19	24	24	32
Yes Bank	-	171.77	5	28	56	25

Source: State Level Bankers Committee, Haryana

Table 1 shows the position of banks' NPAs in MSME loans from March 2017 to March 2022. The NPAs of the MSME sector with all the banks have shown a rising trend. However, NPAs pertaining to MSMEs in PSBs have been higher in comparison to PVSBs. Amongst PSBs, the NPAs in MSMEs of Punjab National Bank have been found to be highest in comparison to other PSBs and PVSBs. Reporting Rs. 599 crores in 2017 and Rs. 971 crores in 2018, reaching Rs. 1725 crore in 2020, and finally settling at Rs. 1849 crore in 2022, PNB leads the list, followed by Canara Bank from the public sector. Amongst private sector banks, HDFC Bank reports the highest FIG, followed by ICICI Bank in 2022.

II. Overview of Preventive Strategies

The emphasis has switched in recent years from "Keeping the Stressed Account from Deterioration" to "Preventing the Account from Falling to Stress Level". There are many factors contributing to the escalating nonperforming loans of Indian banks. One of the numerous causes of rising NPAs includes lending to priority sectors. Though prior studies in the field of NPA were confined to identifying the causes or grounds for NPA, the present study attempted to determine bankers' perspective on the preventive measures which mostly originate internally. A number of NPA management strategies have been used by commercial banks to recover and reduce NPAs. Mainly two types of strategies are necessary to control NPAs. The goal of the corrective steps is to increase recoveries so that bank monies trapped in NPAs can be released for reuse. Preventive measures are to prevent the asset from becoming a non performing asset. Collins (2011), Reddy (2002), Rao & Patel (2015), Singh (2013), Gupta (2012),Zafar et.al., (2013), Tiwari et.al,.(2013), Shanmugasundaram&Selvaraj (2015), Singh, (2016), and Pati (2010) talked about the relevance of curative/corrective measures and preventive measures in tackling the issue of NPAs. It is crucial to think about preventive measures in addition to cleaning up the balance sheets of banks by lowering or eliminating problematic loans. It is well known that credit evaluation and risk management can solve the NPA problem (Chakraborty, 2012). If NPA loans are created by difficulties within the bank, it is the bank's responsibility to remedy these concerns. Otherwise it will lead the banks to take legal action, which is typically considered as a last resort. There is an urgent need to review present procedures and revise them in accordance with cutting-edge methodologies employed in industrialised economies. Both components are crucial to a strong NPA management mechanism. There aren't many studies on preventive management measures, and none of them base their conclusions on evaluations of the methods used to stop NPAs. This work adequately fills this research need. There are seven major preventive management strategies namely such as maintaining the quality of assets through (A) proper credit appraisal; (B) scrutiny and processing of such applications; (C) POST DISBURSEMENT MONITORING; (D) taking effective measures to prevent those accounts whenever symptoms of deterioration in quality are observed; (E) rehabilitation and restructuring of Assets ; (F) development of an effective EWS; and (G) development of an effective Relationship management system. The study's goal is to determine how frequently commercial banks in the Haryana District use these preventive measures when dealing with MSME loans.

III. Research Methodology

The study has an analytical flavor to it. The majority of the information used in this study comes from primary sources that were gathered using the questionnaire approach. The potential preventive measures being used in the context of MSME-related NPAs were identified through an extensive literature review and content analysis of selected banks' MSMEs policies. For comparison purposes, the study focuses on both PSBs and PVSBs. Though there are 12 PSBs and 22 PVSBs, the study is however restricted to NPAs preventive strategies of MSMEs adopted by 5 banks each from Public and PVSBs in Haryana. The study restricts itself to the State of Haryana. Haryana is among the seven states categorized as top achievers in the ranking of States and union territories based on implementation of business reform action plan 2020 (Times of India 2022). Liberal credit is one of the criteria to measure ease of doing business (PIB 2018). Therefore, a number of MSMEs are entering Haryana. In total Haryana has 1, 00,000 MSMEs. However there is rise in NPAs in MSMEs in Haryana (Haryana MSME Policy 2019). Five PSBs and Five PVSBs of ten districts (Ambala, Faridabad, Gurugram, Karnal, Panipat, yamunanager, rohtak, Kaithal, Kurukshetra, Panchkula) in Haryana state are selected as a target groups on the basis of their RBI ranking in terms of amount of NPAs as per 2019. Sample frame covered bank managers of selected public and PVSBs along with borrowers of these banks. A questionnaire was designed and data was collected by visiting the bank branches. A Sample Size of 316 branches have been covered with the help of Stratified Sampling Technique. The respondents include Branch Managers and Section officer of Recovery Department in both Private and PSBs ofselected Districts. The data collected has been presented with the help of tables and graphs.

IV. Results and Dicusssions

A. *Practices to maintain the quality of assets through proper credit appraisal*

Credit appraisal is the ability to adapt certain precautions when granting a new sanction, renewing or increasing an existing limit. Credit appraisal has evolved as a crucial sub-function in Indian banks and refers to an evaluation by a banker before giving any fund in the form of loan or project amount (Kanungo et. al.2001).The economic, monetary, managerial and technical feasibility of the projected plan is evaluated under it. It refers to the estimation of diverse threats that may affect loan reimbursement or creditworthiness. In other words, it determines whether or not the loan will be repaid. The appraisal process can be simple or complex, depending on the purpose and amount of the loan. Banks establish a methodical credit appraisal tactic that is continuously updated in light of changing circumstances (Meher et. Al.,2020; Agarwala 2019; Singh 2013). In this process, assessing the borrower's truthfulness, his reputation, business capability and field experience, administrative ability, and monetary resources corresponding to the extent of the upcoming project are important. According to Punjab National Bank MSME Policy (2020) and Yes Bank Rehabilitation Policy for distressed MSMEs (2020) some of the important practices of the credit appraisal are identified as follows:

1. The manager will inspect the prospective borrower's workplace as the first step in the appraisal process. The manager should pay a visit to the borrower's factory or business, as well as his or her residence.
2. The bank manager must conduct a credit investigation on the prospective borrower in addition to the unit inspection. Credit investigation entails determining the borrower's and guarantor's business reputation and creditworthiness.
3. Information obtained from outside sources, such as meeting with the borrower including existing and previous employees.]
4. Analysis of financials to determine the economic strength and weaknesses and it demonstrates how resources are contributed and the investment is assigned.
5. The bank's credit officer must examine non-financial papers along with the appraisal of financial papers.

Banks always get adhaar card of borrowers to attain full information about borrowers. Collecting and feeding the Mobile/ Phone numbers in CBS and contacting the borrowers over phone regularly helps in credit appraisal process. (Unique Identification Authority of India, Government of India). Charges pertaining to insurance, equitable mortgage, processing charges are due to be paid on time to banks by borrowers. Scrutiny of CIBIL report of the prospective borrowers, thorough and proper pre sanction process, banks statements for 6-12 months to ascertain the existing income, actual salary and assessment of projected income help in preventing NPAs also helps the banks during credit appraisal of borrowers (ICICI Bank Rehabilitation Policy for Distressed MSMEs). After this process banks prepares opinion reports. Qualitative appraisal of financial statements understanding the unhealthy developments in accounts and working of the units and independent valuation of property offered as collateral security to ascertain the actual possession of applicants are the measures taken by the banks before sanctioning loans (Banking Law and Practice 2014).

Credit appraisal being critical in a bank's asset management provides a chance to increase not only the trading volume, but also the earning from assets. On the other hand, strong credit appraisal persuades the banks to give credit to those who deserve to reimburse it. In order to lessen the defaulter’s risk, banks must strengthen their internal credit appraisal system. Simultaneously, the banker should strive for an external credit appraisals mechanism.

The appraisal standards are significant to maintain a strong credit flow and, as a result, avoiding NPAs. In the past, one of the major causes of current NPAs was irresponsible loan given by banks ignoring proper credit appraisal (Sharma 2005). Before the bank proceeds with a lending, the evaluation yardsticks must be updated and an autonomous technical feasibility of the project should be conducted. Sanctioning of loans ignoring due carefulness and considerations of the customer's business, as well as a lack of knowledge or ignorance,

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are other important factors that contribute to NPAs. As a result, it is possible to conclude that superior credit appraisal reduces the likelihood of borrower default and, NPA's of the bank. Because credit appraisal is a well-balanced mixture of many procedural steps, each move must be followed to avoid new slippage of standard assets to NPAs.

Borrowers must be carefully selected in order to maintain asset quality. As a result, all Borrowers/Promoters/Directors/Guarantors' past credit history must be scrutinised in order to be satisfied with their documentation and to ensure conformity of KYC and AML guidelines(RBI/2022-23/10 DOR.STR.REC.8/13.07.010/2022-23). The promoters and management should be given proper attention considering their experience, proficiency, truthfulness, vision, meeting track record, his trading experience, history of strategic initiatives, authoritative practises etc. Therefore, the first and most important aspect of any credit cycle is the selection of borrowers and the quality of appraisal. Excess liquidity and banks' overeagerness to increase lending could result in poor asset quality due to poor borrower selection and the potential danger of adding to the stock of NPAs. As a result, banks must improve their skills as bankers and credit appraisal officers in order to assess the borrower and his credit ratings (Gupta 2010).

In light of the banking system's declining asset quality, which is now standing at a record high, it is crucial to improve due diligence in order to reduce and alleviate the issues caused by rising NPA. Before deciding on a proposal for a credit facility, opening an account, or engaging in any activities, one must exercise due diligence, which is nothing more than the verification of facts and numbers (Kadanda 2018). It is the process of evaluating all relevant facts, including the borrower's and the guarantor's financial, legal, and compliance elements. According to RBI Rules, a bank must conduct Enhanced Due Diligence (EDD) on all of its high-risk clients (RBI 2004). If due diligence is carried out in an organised manner, many issues connected to contaminated portfolios could be avoided (Sahoo 2019).

Table 2. Frequency of maintenance of quality of assets through proper credit appraisal

Frequency I	Never		Rarely		Sometimes		Often		Very Often		Total	
	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
Visiting the factory or business place and residence of the borrower.	47	21	54	22	27	32	9	43	21	40	158	158
Credit investigation of the prospective borrower	31	32	32	14	31	32	32	40	32	40	158	158
External sources of information such as meetings with the borrower and his employees.	35	32	37	24	27	32	30	40	29	30	158	158
Use of Financial statement analysis to determine company's financial strength and weaknesses.	24	22	36	20	23	15	45	56	30	45	158	158
Examination of the non--financial parameters	24	15	30	19	44	44	32	35	28	45	158	158

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Obtaining due diligence report of the borrower	47	10	33	12	45	22	19	47	14	67	158	158
Generation of CIBIL of borrowers	12	15	36	29	42	27	38	40	30	47	158	158
Check RBI defaulter list	21	12	16	13	38	40	43	48	40	45	158	158
Credit risk rating – internal	25	13	61	10	25	35	20	56	27	44	158	158
Enhancing skills of credit appraisal officers	23	10	35	15	37	38	40	50	23	45	158	158

Source: Researchers' Computation from collected Primary Data

From the perusal of the Table 2, it is clearly visible the frequency of protection of quality of assets through proper credit appraisal. It consists of the statements related to quality of assets through proper credit appraisal such as visit of borrowers premises, credit investigation, information from outsiders, analysis of financial and non-financial information, CIBIL score, RBI's defaulter list, credit risk rating etc. It is clearly visible that the maintenance of quality of assets through credit appraisal is superior in case of PVSBs than the PSBs. In comparison to PSB's the private bank officers usually rely on credit investigation, information from outsiders, analysis of financial and non-financial information, CIBIL score, RBI's defaulter list, credit risk rating. In the case of PSBs, there has undoubtedly been an instance of adverse selection, which may be partially attributed to the push from above. This push is absent in the case of private banks, where decisions are made more so on the basis of business motives. As a result, the PSBs must accept responsibility for their ineffective evaluation of potential clients (Businessline 2023). While PSBs have been under constant pressure to reach goals in order to support this sector, it has also been discovered that they exercise less due diligence when evaluating lending (Businessline 2023).But nonetheless, private banks, who carry out identical types of lending required by priority sector regulations and are able to maintain a cleaner portfolio through more due diligence, do not share this situation. Because that PSBs are now ultimately owned by the government and must therefore work towards shared objectives, lending decisions must be made with more caution because they are more vulnerable than private banks.

B. The practice of Maintaining the quality of assets through scrutiny and processing of such applications

Before providing loans to borrowers, senior and field officers should deeply study the loan application presented by borrowers. Loan application should fulfil the terms and condition without confusion. Terms and condition should be in the favor of both parties and easily acceptable. According to Rehabilitation Policy of HDFC BANK for MSMEs, Banks should check the viability of project, market coverage of borrowers and demand of the product. There should be no possibility of over and under financing. Sufficient and timely finance should be given to them. Borrowers must provide proper and correct documents to them so that application processing through computer can be possible. Bank obtains post-dated cheques (PDC)/ ECS mandates for all loans. All the parameters including gestation/ Moratorium details are fed in the system **(RBI/2013-14/359 DNBS.PD/ CC.NO.359 /03.10.001/2013-14).** Bankers usually obtain realistic and time-bound commitment from the borrower/guarantor to initiate necessary suitable steps to arrest the deterioration in the loan quality, replace loans wherever necessary with due approval. They check the documentation, including the revival position, charge creation/registration, insurance cover, and so on, and any inadequacies must be corrected immediately. It is also verified, whether charges about insurance, equitable mortgage, and processing charges are due to be paid. The capture and clearance of the security by Indian banks is the noteworthy challenge in loan screening and managing in risk management (Jose 2014).

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Table 3. Frequency of maintenance of quality of assets through scrutiny and processing of such applications

Frequency II	Never		Rarely		Sometimes		Often		Very Often		Total	
	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
Independent valuation of property offered as collateral security and ascertaining the actual possession by the applicant	31	19	29	20	30	36	36	39	32	44	158	158
Adherence to the KYC norms	54	40	36	27	18	26	28	29	22	36	158	158
Furnishing full details in loan application	25	32	41	26	32	36	35	36	25	28	158	158
Proper and correct documentation	42	32	36	30	27	42	17	19	36	35	158	158
Advising all terms and conditions before disbursement and ensuring their compliance	20	43	31	18	29	27	48	45	30	25	158	158
Timely and adequate finance	23	21	38	41	40	32	23	36	34	28	158	158
Obtaining Post Dated Cheques (PDC) mandates for payments	41	30	17	30	36	30	36	28	28	40	158	158

Source: Researchers' Computation from collected Primary Data

After perusal of Table 3, information about maintenance of quality of assets scrutiny and processing of such applications is depicted. This section consisted of the statements related to valuation of property, KYC norms, loan application details, documentation, terms and conditions compliance etc. It is clearly visible that the maintenance of quality of assets through scrutiny and application processing is superior in case of PVSBs than the PSBs. All Indian banks usually prepare KYC profile. Private bank officers usually give much importance to above mentioned documentation procedures in comparison to PSBs (Apanga et. Al., 2016; Owino 2013; Bessis 2011; Nzoka 2015).

C. The practice of Maintaining the quality of assets through post disbursement monitoring

Credit monitoring is a crucial component of the loan process. Maintaining the asset quality and timely collection of interest and other debts are major responsibilities for banks. Even while sufficient measures are taken during loan assessment and approval, a lender needs to be even more watchful once the loan has been approved. The Bank often uses a successful post-sanction method to maintain efficient and effective management of credit and the percentage of Standard Assets (Nugroho et al. 2018). The broad categories of follow-up, supervision, and monitoring comprise the post-sanction phases (Ramu 2009). For efficient recovery and identification of genuine borrowing problem, constant and persistent effort on day by day is the fundamental principle. Accordingly, the timely support can be forwarded to acceptable mismatch in the financials. According to P MSME Policy of ICICI Bank, post-disbursement credit monitoring's main goal is to make sure that the assumptions established at the time of sanction are strictly adhered to and that the asset's quality confirms the creation of income for both the bank and the borrower. Aside from this, the sanctioned/disbursed credit limit cannot be diverted in any way.

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This is done in order to prevent slippage of account into NPA, guarantee that all funds are used for their intended purpose, and boost the unit's productivity, profitability, and operational efficiency. Funds if used for unproductive or speculative purpose may create serious problems. Rehabilitation Policy for MSME of State Bank of India says that credit monitoring will guarantee proper use of loan money, lower loan losses, and ultimately increase returns to banks. As per McKinsey & Company, a good credit monitoring strategy can assist banks to reduce losses by ten to twenty percent, resulting in a higher returns . By requesting operational data at regular intervals, it should be possible to track the borrowers' actual performance. It is important to maintain regular inspections and stock audits. After disbursement, monitoring also includes inspection of the account and analysis of the audited financials. Continuous monitoring of the borrower account will make it easier to identify issues and take preventative action before they have a negative impact. Useful site inspections, audits, thorough financial analysis, receivables audits, and other measures that may assist the lender in tracking the credit sanctioned. If it is not distributed and monitored appropriately, a good sanction can turn negative. The importance of credit monitoring has increased in light of system-driven NPAs. To check the utilization of loans and limits, post sanction visits are conducted by bank officials at the business places of the borrower. MSME Policy of Axis Bank considers that the assets financed are properly verified as per given specifications of sanction plan. Further on an ongoing basis the cash credit limits which are of running nature are monitored by keeping a tab on the operations in the account and by obtaining monthly stock reports. Drawing power of the borrower is allowed strictly as per the stock/ book debts etc. Banks also monitor the sanction limit by way of periodical inspections of monitoring officer's report and quarterly information system etc. On a yearly basis banks conduct full review of the sanction limits whether term loan or cash credit or other limits (Popli and Puri 2013).

Table 4. Frequency of Maintaining the quality of assets by through a proper monitoring mechanism

Frequency III	Never		Rarely		Sometimes		Often		Very Often		Total	
	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
Ensuring proper end use of funds	2	13	26	25	42	26	48	41	40	53	158	158
Relating the account outstanding to the assets level	22	51	32	23	41	7	31	34	32	43	158	158
Periodic assessment measures	8	29	26	22	16	33	65	33	42	41	157	158
Ensuring the recovery of principal installments in the case of term loans as per the scheduled repayment programme	4	21	29	50	22	15	20	42	20	31	95	159
Looking for 'incipient sickness' and initiate proactive remedial measures	3	50	29	18	43	27	24	21	34	41	133	157
Ensuring compliance as per internal and external reporting requirements	4	22	21	26	31	22	26	42	24	46	106	158
Ensuring effective follow up of advances to maintain good asset quality	4	3	28	24	30	24	42	45	54	62	158	158
Verification of assets	9	13	42	12	0	20	37	52	70	61	158	158
Inspection by branch functionaries	20	20	21	12	29	10	42	53	46	63	158	158

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Contacting the borrowers over phone regularly	29	18	32	12	40	10	37	54	20	64	158	158
Use of robust MIS	34	16	51	11	45	33	16	26	12	72	158	158

Source : Researchers' Computation from collected Primary Data

Table 4 shows the frequency of maintaining the quality of assets through a proper monitoring mechanism. The table specifies that almost all the banks considered in the study whether private or PSBs are rigorously following credit monitoring practices however PVSBs are seen using these practices with more frequently, since most of the responses fall in the category of often and very often. In all the practices of Ensuring proper end use of funds, Periodic assessment measures, Ensuring the recovery of principal installments in the case of term loans as per the scheduled repayment programme, Ensuring compliance as per internal and external reporting requirements, Ensuring effective follow up of advances to maintain good asset quality, Ensuring effective follow up of advances to maintain good asset quality, Verification of assets, Inspection by branch functionaries, Contacting the borrowers over phone regularly and use of robust MIS are very often practiced by PVSBs.

D. Practices to prevent those accounts whenever symptoms of deterioration in quality are observed

This section covers the effective measures to manage those accounts whenever signs of decline in quality are observed. According to Rehabilitation And Revival Policy for MSMEs of Bank of Baroda and Kotak Mahindra Bank, a number of preventive measures are practiced whenever symptoms of deterioration in quality are observed such as review and reporting of problem loans to the authorities; take proactive action like guidance, nursing, problem resolving mechanism; verify correctness of documents relating to revival, insurance cover etc. ; feeding all relevant details in the mechanized system correctly; inform the borrower regarding deterioration of asset quality and call upon him to regularize their account; pass the information of defaulters etc.

Table 5. Frequency of Effective measures whenever symptoms of deterioration in quality are observed

	Never		Rarely		Sometimes		Often		Very Often		Total	
	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
Seizure/Attachments and disposal are warranted	15	17	26	25	35	25	58	53	24	38	158	158
Review and reporting of problem loans	20	18	12	13	33	21	81	70	12	36	158	158
Verification of correctness of documentation pertaining to revival position, charges, insurance cover etc., to be made and deficiencies if any have to be rectified immediately	20	15	38	21	23	18	39	48	38	56	158	158
Feeding all parameters including gestation/moratorium details in the system correctly	27	8	42	27	14	18	35	42	40	63	158	158
Proactive action like guidance, nursing, problem resolving from the bank side.	10	9	28	25	45	32	25	24	50	68	158	158
Bring the deterioration in asset quality to the notice of the borrower and call upon him to regularize the account	13	9	32	20	39	20	28	39	46	70	158	158
Obtain realistic and time bound commitment from the borrower/guarantor	10	11	28	30	35	28	41	36	44	53	158	158

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Compromise or use of various settlement schemes.	8	9	25	36	35	28	44	42	46	43	158	158
Actively circulate information of defaulters.	24	13	34	31	26	22	35	45	39	47	158	158
Recalling the advance	10	13	25	22	39	34	39	45	45	44	158	158

Source : Researchers' Computation from collected Primary Data

Table 5 exhibit that both public and PVSBs take necessary corrective measures. However, the practice of Proactive action like guidance, nursing, problem resolving from the bank side are more prevalent in PVSBs. PVSBs are behind PSBs in compromise or usage of various settlement strategies. However, in practices of verification of correctness of documentation pertaining to revival position, charges, insurance cover etc., to be made and deficiencies if any have to be rectified immediately, PVSBs lead PSBs.

E. Practice of rehabilitation and restructuring of Assets

MSMEs frequently need quick corrective action to regain their lost momentum. The assumptions that underpin business operations frequently diverge from reality. It is possible for borrowers to experience real difficulties that prevent them from meeting their obligations on time and as expected. As a result, the account's quality will decline. Timely proactive action will undoubtedly aid the borrowers in getting out of trouble. Techno Economic Viability (TEV) research may be used as the foundation for evaluating the likelihood of revival. After a thorough evaluation of the viability and promoter's intentions and when the bank is confident that turnaround will occur within a specified time frame, restructuring should be tried. As per Policy on Restructuring / rehabilitation for revival of potentially viable sick Micro and Small units, HDFC Bank , when it comes to completely unviable units, as determined by the Bank/Consortium, it is preferable to take action to pay back the Bank's debts and, if necessary, use legal methods to dispose of the security in order to collect what is feasible before the security worsens.

An important preventive strategy for viable units is their rehabilitation within the time frame. Reducing the amount of NPAs would be made easier with prompt mitigation and relief plans for the impacted borrowers and the start of time-bound remedial action, including rehabilitation and restructuring. In order to avoid default, borrowers in financial difficulties renegotiate and change the conditions of their loans with their lenders. It aids in maintaining consistency in debt servicing and provides borrowers with some leeway to regain financial stability (IIBF 2021). Restructuring is a process in which a lender makes concessions to a borrower due to financial or legal considerations related to the borrower's financial trouble. Restructuring typically entails changing the terms of the advances or securities, which typically include, among other things, modifications to the repayment period, repayable amount, amount of installments, rate of interest, rollover of credit facilities, approval of additional credit facilities, augmentation of existing credit limits, and compromise settlements when there is a longer than three-month payment period for the settlement amount (RBI 2017). RBI updated its current rules for Rehabilitation of ill Micro and small Businesses (MSE) via Ref. No. RPCD CO.MSME & NFS. BC.40/06.02.31-2012-13, dated November 1, 2012. These guidelines included, among other things, the following: I Early detection of unit sickness; (ii) Extending handholding after detecting symptoms of sickness; (iii) Early implementation of corrective measures through restructuring exercise; and (iv) Provision for the borrower to present his case for restructuring to the higher authority in case the same is deemed non-viable by the delegate under whose power it otherwise falls. Also, the repayment of the unpaid interest part amount due may be appropriately rephrased in order to correspond with the predicted repayment capability under the restructuring package (RBI 2021).The purpose of the rules is to ensure that viable MSMEs with debt concerns can restructure their debts in a timely and transparent manner outside of the scope of BIFR, DRT, CDR, and other legal actions. As per Rehabilitation and revival policy of Sick MSMEs of ICICI Bank and Bank of India, through an organised, planned, and preventative restructuring programme or rehabilitation package, the framework will specifically endeavour to preserve viable MSMEs that are impacted by certain internal and external circumstances and limit losses to lenders (the Bank) and other stakeholders.

Hence, in deserving cases, the first priority in NPA management would be possible prevention through replacement, restructuring, or rehabilitation of the borrower's business (RBI/2014-15/74 DBOD.No.BP.BC.9/21.04.048/2014-15). The viability studies must be conducted on a case-by-case basis, if the branch level review points out that the business issues are not temporary. Checking of the business viability and the stake of the borrowers, are the basic requirements for the Bank to perform realignment or recovery. This category includes accounts where the borrower wishes to repay his debts to the bank but lacks the funds to do so right away. So, the branch must investigate the source of the illness and recommend a course of action.

- The rehabilitation option shall be considered in cases where there appears to be prima facie scope for restoring the business's viability.
- The plan shall be implemented in cases where it is probable to get the business back in good condition by offering lowest additional funds and marginal concessions so that the unit may meet its requirements upto 5-7 years.
- If the borrower is financed through a consortium, a decision on rehabilitation/restructuring must be made after extensive consultation with the consortium banks. (RBI 2014).

Therefore, to rehabilitate the unit, the following steps may be taken

• Interest revision and/or instalment rescheduling.
• Making available additional funds based on need.

Table 6. : Frequency of re-phasement/restructuring/rehabilitation of assets

Frequency IV	Never		Rarely		Sometimes		Often		Very Often		Total	
	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
Re-phasement of loans	42	67	45	48	20	16	22	18	29	9	158	158
Restructuring of advances	55	45	57	41	20	31	12	31	14	10	158	158
Rehabilitation to restore the viability of the business	69	42	33	56	30	31	13	22	13	7	158	158

Source : Researchers' Computation from collected Primary Data

The results from table 6 show that Practice of replacement/ restructuring /rehabilitation is very less frequently used by banks. It demonstrates how the banks' help for restructuring and rehabilitation is insufficient. It is consistent with IIBF 2021 findings that the banks were unable to provide assistance to MSMEs during a time of financial hardship. Banks typically don't consider the business potential of the unit, simply the actual performance over the course of the financial year. The aforementioned unit intends to carry on with its operations and make a profit to cover any outstanding debts to the bank. Yet, they do not wish to put into practise the RBI instructions for MSMEs' rehabilitation; they are only interested in a hard-core recovery. They merely want their money back from struggling MSMEs, with no assistance whatsoever, only a sudden lowering of working capital limitations.

F. Practices of identifying the weaknesses of assets through early warning signals (EWS)

An ideal early warning system anticipates potential risks and assists bank management in forecasting default before it is too late. It enables them to implement the measures required to make sure that loans are recovered on time, thereby sustaining the bank's asset quality. Given the rising trend of NPAs in credit institutions, even regulatory bodies are calling for the deployment of Early Warning Systems (EWS) to detect potential loan defaults early (Joseph & Prakash 2014). The Reserve Bank of India came up with the concept of Early Warning Signals (EWS) and Red Flagged Accounts (RFA) for early detection and prevention of fraud. The RBI's regulations have been evolving from rule-based monitoring to an early warning identification approach over the last two decades (PWC Annual Report 2019). A Red Flagged Account (RFA) is one where a suspicion of fraudulent activity is thrown up by the presence of one or more Early Warning Signals (EWS) (www.indiaforensic.com). These signals in a loan account should immediately put the bank on alert regarding a weakness or wrongdoing which may ultimately turn out to be fraudulent. The EWS so compiled by a bank would form the basis for classifying an account as an RFA. Rehabilitation and Revival Policy of Bank of India and Yes Bank believes that having all-in-one NPA management software with an integrated Early Warning Solution can significantly reduce NPA in banks. Siraj K.K (2012) also emphasised on usage of digital technologies to manage NPA. According to India's chief economic advisor, Krishnamurthy V Subramanian (Vasudevan 2022), to determine the best model for large corporate lending, the Indian banking sector must make investments in technology and data analytics. This will encourage investment and enable the economy expand to $5 trillion in size. When it came to corporate lending, many defaults could have been prevented if Indian banks had applied data analytics. Banks must have a computerized system in place to monitor customers' credit standing. An Early Warning System (EWS) driven by machine learning (ML) as well as artificial intelligence (AI) will operate around-the-clock and be able to monitor occurrences that are early signs of trouble (Naveenan 2016). Banking institutions must spend money on IT systems to automate tasks like risk management and monitoring for problematic loans. These systems will aid in the effective provision of early warning signals in order to reduce NPA. When a loan is on the verge of becoming delinquent or has already become one, certain

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warning signs appear. These signs can be classified into geographic, behavioural, financial, perception, and industry types based on the tendencies noted (Goswami & Gulati 2022). To identify loans that may go bad, a bank must separate and describe the EWS indicators that are specific to their portfolio. This can be determined by a variety of factors such as customer segments, industry/sector, type of investment, repayment capacity, and so on. As per MSME Rehabilitation and Revival policy of Yes Bank and Punjab National Bank an Early Warning System can do the following:

- Reduce the likelihood of future NPAs
- Regularly evaluating customer portfolios;
- limit the accumulation of NPA stocks;
- assist in making effective decisions to limit exposure in default-prone segments
- Maximise loan recovery through timely action.
- Make good use of capital.

It is only a matter of time before financial institutions are unable to effectively monitor and manage credit risks. Digital technologies today are disrupting and repositioning the lives of every banker and customer (Dinesh et. al., 2020). Many banks are now functioning on EWS, which are mainly the use of big data and analytics technology to generate dashboards on specific issues. Banking organizations in India need to move from an essentially compliance-driven post facto mechanism to a proactive control-based digital system to monitor credit risk (PWC annual report 2019). The combination of RPA and EWS analytics can enhance and fortify EWS response time. Alliance for security valuation, notice of common resolution and revival strategy, and so on could be improved at the resolution stage by considering big data points such as alike transactions, zonal prices, buying history, and so on (Norov et. Al., 2022). Price baselining and registry searches could be highly transparent, data-driven, dependable, and accessible using RPA and blockchain. Based on unique identifiers, big data, natural language processing, and the use of low-cost technologies such as geo-tagging and NFC, appropriate algorithms and analytic models should be able to easily decode patterns of fund syphoning from multiple points in the banking and financial system (Sardana and Singhania 2018). The block chain technology is being used to improve the efficiency of certain business banking products for credit decisions, timely generation of red flags, and so on. (Dashottar and Srivastava 2021). According to Vikram Babbar, executive director, Fraud Investigation & Dispute Services, EY, banks are increasingly asking forensic audit companies to look at accounts that have not defaulted but may be beginning to exhibit some early warning signals of problems (Business Standard 2023). Lenders began requesting this when they were under pressure from subpar loans. According to forensic auditors, banks typically use these services after a business defaults on payment. But now, lenders keep a close eye on things if they anticipate difficulties rather than waiting for a default to occur. According to Crumbley (2003), forensic science is the application of natural law to human law. Forensic accounting, according to Zysman (2004), is the merger of accounting, auditing, and investigative skills. The science that is being discussed here is accounting science, which analyses and interprets economic data to provide a truthful picture. It has been discovered empirically that forensic accountants are becoming more important and that they play a substantial influence in lowering NPAs in Indian banks (Mishra et al., 2020). One of the most dependable ways to identify any asset-related difficulties and spot warning signs relating to financial imbalances and gaps is by using financial indicators. Financial concerns such as late loan payments, exceeding the operational loan limit, missed or late employee payrolls, or returned checks issued on a customer's account can also be indicated by financial indicators. Banks typically take into account the potential future growth of a customer's firm in order to reduce the risk associated with corporate loans. Many industrial indicators are measured and examined for this (Kaaya & Pastory 2013). Credibility and trust are two of the guiding principles of the banking industry. Banks must take into account behavioural indicators that reveal information about the moral character and technical proficiency of the individuals managing the corporate when disbursing huge quantities of money, particularly to corporations. Financial, behavioural, geographic, and industry categories all have early warning signs for bad lending. These Indicators for corporate credit risk include:

Table 7: These Indicators for corporate credit risk

Financial Indicators	Industry Indicators	Behavioural indicators
Customer's creditworthiness	Industry growth rate	Delayed financial reporting requirements
Operating loan utilisation	Industry regulations	Deception/misrepresentation of facts
Expense management	Ability to control costs/rising input prices	Lack of responses
Cash flow requirements	Emerging market trends	Providing irrelevant information
Covenants & collateral tracking	Changing customer behaviours	Misrepresented or destroyed records
Account receivables and debtor ageing		Lack of stakeholder interest in business strategy and planning
		Too much change in accounting personnel or procedures.
		Creating fake or shell entities

Source: Vasudevan, 2022

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Table 8 Identification of the weaknesses of assets through early warning signals

Frequency VI	Never		Rarely		Sometimes		Often		Very Often		Total	
	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
Case by case study and analysis in respect of overdue accounts	25	25	10	25	14	21	86	49	25	38	160	158
Use of technology and data analytics to detect the early warning signals.	29	15	25	13	45	24	17	52	31	54	147	158
Use of forensic audits to know the borrower's intent	19	31	14	39	26	35	46	24	53	29	158	158
Pre-Examination of External Non-Controllable factors	21	19	80	51	21	33	14	37	21	19	157	159
Identification of behavioral patterns to examine red flags as early warning signals.	59	50	46	18	3	23	30	58	21	9	159	158
Assessment of Financial indicators to detect the financial conditions of borrowers.	2	0	6	12	7	6	63	65	80	75	158	158
Evaluation of Industry-specific warning signs	49	53	4	18	54	39	33	12	18	35	158	157
Communication with the borrowers to know the present debt-related security concerns and financial conditions.	46	18	41	20	19	3	21	58	31	59	158	158

Source: Researchers' Computation from collected Primary Data

Table 8 reveals the frequency of examining the weaknesses of assets through early warning signals. The findings of our study depict more usage of technology by Private sector for data analytics and EWS detection. Both public and private banks are applying the early warning signals such as analysis in respect of overdue accounts, application of technology and data analytics to detect the early warning signals, use of forensic audits to know the borrower's intent, branch or region wise information of NPA's including increase/decrease, identification of behavioral patterns to examine red flags, assessment of Financial indicators to detect the financial conditions of borrowers. It is exhibited from the Table that PSBs are following traditional practices and PVSB banks are adopting an advanced monitoring approach viz. a digital credit risk monitoring framework to capture such early warning signals (Sharma 2016).. . The studies also showed that the private sector communicates frequently and frequently with the borrowers to learn about their current financial and security worries and debt-related problems (Psillaki et. La., 2010).

G. Practices of Relationship management

This section covers the effective measures relating to the relationship management considered by the bankers through connexions with villagers or self-help groups, village elders or opinion leaders, government agencies, business facilitators or recovery agents, liaison with customers regarding utilisation of services and linking with them through social networking sites (Kadanda & Raj 2018). This section highlights the multiple ways banks can leverage various mediums to enhance customer relationship. Table 9 exhibit that both PSBs and PVSBs maintain good rapport and relationship with the customers, villagers, government agencies etc. However, PVSBs are more active in marinating good relationship with customers (A J and P K 2013). It is a good step by the bankers in order to recover and management of NPA's. The requirements and wants of today's consumers are substantially different from those of even ten years ago, despite the fact that the banking industry has always tried to preserve a connection that is focused on the customer. Customers' expectations and their relationships with banks are changing quickly, Capgemini (2017) says, as a result of the emergence of social media platforms like Facebook and Twitter during the past few decades ,more individuals use social media (2017). Consumers now more than ever anticipate banks to provide services through these channels (Swami et. Al., 2018). If banks are to continuously engage with their customers they have to make efforts to leverage this rapidly emerging technology. Our study finds PVSBs are more active on usage of social media to enhance relationships with customers.

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Table 9. Frequency of Relationship Management Practices

	Never		Rarely		Sometimes		Often		Very Often		Total	
	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private	Public	Private
Participation in Village or SHG meetings	22	24	29	28	37	32	35	32	35	34	158	158
Maintaining good rapport with village elders and opinion leaders	23	31	25	31	29	30	35	32	46	35	158	159
Maintaining good rapport with government agencies.	32	30	33	35	31	31	31	29	31	33	158	158
Meeting with business facilitators or recovery agents regarding utilisation of services.	31	32	33	27	30	31	35	36	30	32	159	158
Linking Customer through social networking sites	40	29	44	30	29	30	23	32	22	37	158	158

Source : Researchers' Computation from collected Primary Data

The table 9 shows the frequency of maintaining relationship management through various methods. It can be seen that the practice of participation in village or SHG's meetings, maintaining good rapport with village elders, opinion leaders and government agencies is more prevalent in public sector banks. However usage of social networking sites to link with customers is often and very often used by private sector banks. Private banks and wealth managers are not only boosting their operations on these platforms as more clientele and prospects have an active social media presence, but they are also developing communities that are clientele- focused (vaniagoncalves 2017).

V. Conclusion

The growing concern about NPAs from MSME sector has strained the entire banking system. There is an urgent need to develop and realize a wide-ranging approach to manage NPAs accruing from MSMSEs. It would undoubtedly be challenging for the banking industry given the remarkable rise in non-performing assets (NPAs) and willful defaults during the last five years, as well as the RBI's direction to enhance lending to priority sectors like MSME. Consequently, it prompts severe questions about the NPA management's methods. It is essential that NPA prevention occurs as soon as possible given the potential negative effects that the rising prevalence of NPAs may have. Two crucial issues must be addressed in NPA prevention policies: first, how to stop it from happening again at this magnitude? And second, how can potential NPAs that are already in existence be managed to prevent them from becoming NPAs? Instead of treating NPAs after they have occurred, the pre-emptive steps must be implemented to control them (Meher et. Al. 2020). Nevertheless, various challenges await the Indian banking system's credit appraisal and monitoring capabilities. They must be polished one by one, with a focus on means such as maintaining the quality of assets through (A) proper credit appraisal; (B) scrutiny and processing of such applications; (C) post disbursement monitoring; (D) taking effective measures to prevent those accounts whenever symptoms of deterioration in quality are observed; (E) rehabilitation and restructuring of Assets ; (F) development of an effective EWS; and (G) development of an effective relationship management system.

Up until recently, the majority of the government's and the RBI's (Reserve Bank of India) actions had been focused on the management of the existing NPAs. The goal was to identify techniques to lessen the severity of NPAs. This was motivated by the notion that bank balance sheets needed to be corrected and cleaned up. It is crucial to think about preventive measures in addition to cleaning up the balance sheets of banks by lowering or eliminating problematic loans. Preventive actions are typically of a structural character. These components are crucial to a strong NPA management mechanism.

This study is empirical in nature and is primarily focused on bankers' perspectives on NPA prevention practices being followed in selected banks. The study is secondary in the sense it identifies various preventive practices being followed in selected bank by doing content analysis of their respective MSME policies and thereafter it becomes primary in the sense, on the enlisted preventive practices the responses of 316 bankers have been collected to comment on how frequently these practices have been adopted by these bankers. Therefore this study uses both primary and secondary data. The study found that maintenance of quality of assets through credit appraisal is superior in case of PVSBs than the PSBs. The majority of bankers concurred that the CIBIL score was the most crucial piece of technology they employed to avert NPA (Dinesh et al., 2020). Moreover, the private bankers usually give much importance to documentation procedure in comparison to PSBs. The private bank officers usually rely much on credit investigation, information from outsiders, analysis of financial and non-financial information, CIBIL score, RBI's defaulter list and credit risk rating. Credit risks are tracked using a variety of techniques, including audits, financial statement analysis, physical examination by bank managers, and risk questionnaires (Tamimi and Mazrooei, 2007). Also, the study has lessons for PSBs bank that they must thoroughly investigate the business they are providing money to. Loans to failing enterprises will prevent enough money from being available for great investments. Hence, once signs of a decline in quality are noticed, both sector banks are prefering to take the appropriate preventative and corrective measures. The list of defaulters' names is made public by both the bankers. This instills a fearful feeling and serves as an incentive. After making a loan, the banks have also been keeping an eye on the company's performance and are attempting to predict whether it would eventually fail. Only with a valid credit assessment and risk management component can the NPA problem be solved in the long run (Chakraborty, 2012). To change the way credit is evaluated in banks, credit arrangements and reviews must be documented as soon as authorisation is given. When there is a lack of liquidity, the managing an account framework is ready to increase lending while compromising resource quality, which raises concerns about adverse results and the potential threat of the stock of NPAs rising. The findings show that nearly all of the banks taken into consideration for the study, whether private or PSBs, strictly adhere to credit monitoring practises. PVSBs are, however, observed using these practises more frequently; the majority of responses fall into the category of often and very often. The results also found that the Practice of replacement restructuring rehabilitation is very less frequently used in case of PSBs as well as PVSBs. Also, all banks have been recognising asset issues through early warning signs. To capture such early warning signs, PVSB banks have adopted an advanced monitoring strategy and a digital credit risk monitoring framework. According to our survey, PVSBs are more active users of social media to strengthen customer interactions. Overall, it can be concluded that the prospective and borderline cases require prompt identification and treatment so that they do not enter the NPA categories. As a result, the key assumption behind formulating preventive NPA management strategic planning is that investing resources in generating solid plans for preventive NPAs management strategies will significantly increase the chances of effective and efficient implementation and therefore prevent the occurrence of NPAs (Sahu and Maharana 2017). This study will signal practical steps at the regulator level to reduce the massive weight of NPAs in MSMEs.

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