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Effectiveness of the Insolvency and Bankruptcy Code in Resolving Non-Performing Assets Evidence from Indian Banks in Kerala

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Abstract

The Insolvency and Bankruptcy Code (IBC) was introduced in India to strengthen corporate insolvency resolution and improve recovery outcomes for lenders. The present study examined the perceived effectiveness of the IBC in resolving Non-Performing Assets (NPAs) among Indian banks operating in Kerala. Primary data were collected from 200 banking officials drawn from key functions associated with stressed asset management, including credit, recovery, legal, and risk. A structured questionnaire was used to measure four outcome dimensions: perceived impact of IBC on NPA reduction, recovery effectiveness under IBC, timeliness and efficiency of IBC resolution, and perceived improvement in bank performance following IBC outcomes. The responses were coded and analysed using EDUSTAT. Descriptive statistics were used to summarise respondent profile and construct-level scores, and hypothesis testing was carried out using section-wise scale scores aligned to the study objectives. The results indicated that respondents reported favourable perceptions across all four effectiveness dimensions, with statistically significant support for the hypotheses. Timeliness was rated positively but comparatively lower than other dimensions, suggesting that procedural and institutional constraints continued to influence time-bound closure in practice. The study concluded that IBC was perceived as a credible and structured mechanism for NPA resolution in Kerala, with scope for further strengthening implementation efficiency.

Keywords: Insolvency and Bankruptcy Code, Non-Performing Assets, Recovery Effectiveness

Introduction

Non-Performing Assets (NPAs) remain a persistent constraint on the stability and intermediation capacity of the Indian banking system, affecting credit expansion, profitability, and risk-taking behaviour. NPAs weaken bank balance sheets through higher provisioning requirements and reduced interest income, and they increase the cost of capital by elevating perceived credit risk (Reserve Bank of India [RBI], 2023). From a financial system perspective, elevated NPAs impair the transmission of monetary policy and reduce the ability of banks to support productive investment, particularly in regions where bank credit plays a dominant role in enterprise financing (RBI, 2023).

In response to legacy issues of delayed recovery and fragmented creditor remedies, India introduced the Insolvency and Bankruptcy Code (IBC) as a consolidated legal framework intended to improve the resolution of distressed firms through creditor-in-control processes and structured, time-bound resolution mechanisms (Government of India, 2016). The design of the Code emphasises value maximisation, balancing stakeholder interests, and providing a predictable institutional pathway for insolvency resolution, thereby improving recovery prospects compared to prolonged litigation-based recovery routes (Government of India, 2016; Insolvency and Bankruptcy Board of India [IBBI], 2024).

Within this context, the present study examined the effectiveness of the IBC in resolving NPAs from the perspective of banking officials in Kerala. Kerala provides an appropriate setting for such an assessment because banks operating in the state serve a diverse portfolio of retail, MSME, and corporate credit, while simultaneously engaging with formal recovery mechanisms for stressed assets. Understanding how IBC is perceived to influence NPA reduction, recovery effectiveness, resolution timeliness, and post-resolution performance is relevant for operational policy within banks and for strengthening the institutional ecosystem supporting insolvency resolution (IBBI, 2024; RBI, 2023).

Background of the Study

Prior to the IBC, recovery and resolution of stressed assets in India relied on multiple mechanisms, including lender-driven restructuring approaches and enforcement or tribunal-based routes, which often suffered from coordination problems, prolonged timelines, and uncertain value realisation (RBI, 2023). These structural constraints contributed to the persistence of large stressed exposures on bank balance sheets and created incentives for repeated restructuring and delayed recognition of stress, thereby increasing the eventual economic cost of default resolution (RBI, 2023).

The IBC introduced a unified framework for corporate insolvency resolution, placing emphasis on collective creditor decision-making through the Committee of Creditors and a structured resolution process under the supervision of an adjudicating authority (Government of India, 2016). The process design sought to reduce information asymmetry through formal disclosures and professional administration, and to improve recovery outcomes by enabling competitive resolution plans and transparent valuation procedures (Government of India, 2016; IBBI, 2024). In principle, such features strengthen creditor bargaining power and improve discipline among borrowers by increasing the credibility of formal resolution (IBBI, 2024).

However, the realised effectiveness of IBC-based resolution depends on institutional capacity, case complexity, litigation intensity, and the quality of resolution applicants, which can influence both the speed and the extent of value realisation (IBBI, 2024; RBI, 2023). For banks, effectiveness is reflected not only in recovery amounts but also in the closure of long-pending accounts, reduced administrative burden, and improved asset quality indicators such as net NPAs and profitability outcomes after resolution (RBI, 2023). Consequently, a Kerala-based assessment that focuses on bank officials' experience and perceptions offers a practically grounded understanding of how IBC functions as an operational recovery pathway in the banking sector.

Research Questions

1. Do banking officials in Kerala perceive that the Insolvency and Bankruptcy Code contributes to the reduction of Non-Performing Assets?

2. Do banking officials in Kerala perceive that recovery effectiveness under the Insolvency and Bankruptcy Code is favourable?
3. Do banking officials in Kerala perceive that the Insolvency and Bankruptcy Code provides timely and efficient resolution of stressed assets?
4. Do banking officials in Kerala perceive that successful Insolvency and Bankruptcy Code resolutions contribute to improved bank performance?

Research Objectives

1. To examine the perceived impact of the Insolvency and Bankruptcy Code on the reduction of Non-Performing Assets among Indian banks operating in Kerala.
2. To assess the perceived recovery effectiveness achieved through Insolvency and Bankruptcy Code resolutions among Indian banks operating in Kerala.
3. To analyse the perceived timeliness and efficiency of Insolvency and Bankruptcy Code resolution processes among Indian banks operating in Kerala.
4. To assess the perceived improvement in bank performance following Insolvency and Bankruptcy Code outcomes among Indian banks operating in Kerala.

Hypotheses

H1. The perceived impact of Insolvency and Bankruptcy Code proceedings on the reduction of Non-Performing Assets is significantly above the neutral level among Indian banks operating in Kerala.

H2. The perceived recovery effectiveness achieved through Insolvency and Bankruptcy Code resolutions is significantly above the neutral level among Indian banks operating in Kerala.

H3. The perceived timeliness and efficiency of resolution of stressed assets through the Insolvency and Bankruptcy Code are significantly above the neutral level among Indian banks operating in Kerala.

H4. The perceived improvement in bank performance following Insolvency and Bankruptcy Code outcomes is significantly above the neutral level among Indian banks operating in Kerala.

Methodology

The study adopted a descriptive and analytical research design to assess the perceived effectiveness of the Insolvency and Bankruptcy Code in resolving Non-Performing Assets in Indian banks operating in Kerala. The approach was cross-sectional in nature, with primary data collected at a single point in time from banking officials who were expected to possess functional knowledge of NPA management and IBC-related resolution processes. The study relied on perception-based measurement because IBC outcomes are operationally experienced through internal recovery processes, committee decisions, and case progress monitoring, which are directly observed by bank personnel in credit, recovery, legal, and risk functions.

The population of the study comprised employees working in scheduled commercial banks operating in Kerala who were involved in, or adequately familiar with, NPA identification, monitoring, recovery, legal follow-up, and IBC case handling. The sample for the study consisted of bank officials selected from different bank categories and functional departments such as credit, recovery, legal, risk/credit monitoring, operations, and audit. To ensure representation, respondents were approached from multiple districts in Kerala and from different job levels, including officers, managers, and senior managers. The sample size was

fixed as 200 respondents, which was considered adequate for a small journal paper using a multi-section Likert scale instrument and for conducting descriptive analysis and hypothesis testing.

A purposive sampling approach was adopted by selecting officials who were involved in, or sufficiently familiar with, NPA management and IBC-related processes. Efforts were made to include respondents from different bank categories, functional departments, job levels, and districts within Kerala to improve representativeness within the study scope. Participation was voluntary and informed consent was obtained prior to administration of the questionnaire. Respondents were assured of confidentiality and anonymity, and the data were used only for academic and research purposes.

Primary data were collected using a structured questionnaire developed specifically for the study. The instrument included a profile section and multiple Likert scale sections to measure perceived impact of IBC on NPA reduction, recovery effectiveness under IBC, timeliness and efficiency of IBC resolution, and improvement in bank performance after IBC outcomes. An additional section captured implementation challenges and institutional support associated with IBC case processing. All scale items were framed as statements and measured on a five-point Likert response format ranging from Strongly Disagree to Strongly Agree. Higher scores represented higher perceived effectiveness for the effectiveness-related sections.

The questionnaire was administered to eligible respondents through direct distribution and structured follow-up to ensure completeness of responses. Completed schedules were scrutinised for missing responses and consistency. The responses were coded, tabulated, and consolidated for analysis. Scale scores were computed by averaging the item scores within each section to derive construct-level measures aligned to the hypotheses.

Data analysis was carried out using EDUSTAT. Descriptive statistics such as frequency and percentage were used to summarise the profile characteristics of respondents, while mean and standard deviation were computed to describe the level of perceived effectiveness for each construct. The hypotheses were tested by applying appropriate statistical tests based on the construct-level scores derived from the Likert scales, and the findings were interpreted in relation to the research objectives.

Data Analysis and Interpretation

Introduction

The completed questionnaires were coded and tabulated. The analysis was carried out using EDUSTAT. Descriptive statistics (frequency, percentage, mean, and standard deviation) were used to summarise the profile of respondents and the perceived effectiveness of the Insolvency and Bankruptcy Code in resolving NPAs in Kerala. The four hypotheses were tested using the relevant scale scores derived from the Likert items.

Note: Likert scoring was 1 = Strongly Disagree to 5 = Strongly Agree. Higher scores indicated higher perceived effectiveness.

Profile of respondents

Table 1

Bank category of respondents

Category	Frequency	Percentage
Public sector	89	44.5
Private sector	71	35.5
Regional rural bank	18	9.0
Co-operative bank	20	10.0
Other	2	1.0

The respondents were drawn primarily from public sector banks (44.5%) and private sector banks (35.5%). Regional rural banks (9.0%) and co-operative banks (10.0%) were also represented, indicating coverage across key banking segments operating in Kerala.

Table 2

District distribution of respondents

Category	Frequency	Percentage
Alappuzha	18	9.0
Ernakulam	14	7.0
Idukki	13	6.5
Kannur	12	6.0
Kasaragod	14	7.0
Kollam	19	9.5
Kottayam	16	8.0
Kozhikode	19	9.5
Malappuram	14	7.0
Palakkad	12	6.0
Pathanamthitta	12	6.0
Thiruvananthapuram	13	6.5
Thrissur	11	5.5
Wayanad	17	8.5

The sample covered all districts of Kerala with a reasonably even spread. The highest representation was from Kollam and Kozhikode (9.5% each), followed by Alappuzha (9.0%) and Wayanad (8.5%). This distribution supported state-wide representation of banking officials.

Table 3

Designation of respondents

Category	Frequency	Percentage
Officer	67	33.5
Manager	83	41.5
Senior manager	39	19.5
Other	11	5.5

Managers formed the largest group (41.5%), followed by officers (33.5%). Senior managers constituted 19.5%, indicating that the sample included decision-making and supervisory levels relevant to credit monitoring, recovery, and IBC processes.

Table 4

Department or role of respondents

Category	Frequency	Percentage
Credit	49	24.5
Recovery	44	22.0
Legal	27	13.5
Risk/Credit monitoring	32	16.0
Operations	21	10.5
Audit	21	10.5
Other	6	3.0

A substantial proportion of respondents were from credit (24.5%) and recovery (22.0%) functions, followed by risk/credit monitoring (16.0%) and legal (13.5%). This profile aligned with the study requirement that respondents possessed relevant functional exposure to NPA management and IBC-related processes.

Table 5

Years of experience of respondents

Category	Frequency	Percentage
Below 5	38	19.0

5–10	69	34.5
11–15	51	25.5
16 and above	42	21.0

The sample showed balanced representation across experience categories. The largest share was 5–10 years (34.5%), while 46.5% had more than 10 years of experience, supporting informed responses regarding recovery mechanisms and institutional processes.

Table 6

Experience in stressed asset or NPA handling

Category	Frequency	Percentage
Yes	150	75.0
No	50	25.0

A large majority (75.0%) reported experience in stressed asset or NPA handling. This strengthened the suitability of the dataset for evaluating perceived effectiveness of IBC-based resolution practices.

Table 7

Exposure to IBC cases

Category	Frequency	Percentage
Direct handling	83	41.5
Support role	56	28.0
Awareness only	40	20.0
No exposure	21	10.5

More than two-thirds of the respondents had direct handling (41.5%) or support-role exposure (28.0%) to IBC cases. This indicated adequate operational familiarity with IBC procedures and outcomes among the respondent group.

Table 8

IBC-related accounts handled or assisted

Category	Frequency	Percentage
0	35	17.5
1–5	86	43.0
6–10	46	23.0

Above 10	33	16.5
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A substantial proportion reported involvement with IBC accounts. About 82.5% handled or assisted at least one IBC-related account, and 39.5% reported handling six or more accounts, indicating meaningful exposure to IBC resolution processes.

Descriptive statistics of key constructs

Table 9

Descriptive statistics of scale scores

Construct	N	Mean	SD	Minimum	Maximum
Perceived impact of IBC on NPA reduction (B)	200	3.721	0.400	2.58	4.75
Recovery effectiveness under IBC (C)	200	3.636	0.396	2.42	4.75
Timeliness and efficiency of IBC resolution (D)	200	3.539	0.411	2.33	4.75
Improvement in bank performance after IBC outcomes (E)	200	3.632	0.431	2.42	4.83
Implementation challenges and support (F)	200	3.299	0.377	2.17	4.50

All four effectiveness-related constructs (Sections B–E) recorded mean scores above the neutral midpoint of 3.00, indicating overall favourable perceptions regarding IBC effectiveness in Kerala. The timeliness construct (D) recorded the lowest mean among the effectiveness constructs (3.539), suggesting that time-bound resolution was perceived positively but less strongly than NPA reduction and recovery effectiveness. The implementation challenges and support construct (F) showed a moderate mean (3.299), indicating the presence of operational constraints alongside moderate institutional support.

Hypothesis testing and interpretation

The hypotheses were tested by comparing the relevant section mean score against the neutral midpoint (3.00) using a one-sample t-test (two-tailed).

Table 10

Hypothesis testing results

Hypothesis	N	Mean	SD	Mean – 3.00	t	df	p	95% CI low	95% CI high	Effect size d
H1	200	3.721	0.400	0.721	25.515	199	< .001	0.666	0.777	1.804
H2	200	3.636	0.396	0.636	22.707	199	< .001	0.581	0.691	1.606

H3	200	3.539	0.411	0.539	18.509	199	< .001	0.481	0.596	1.309
H4	200	3.632	0.431	0.632	20.735	199	< .001	0.572	0.693	1.466

The mean scores for all four constructs were significantly higher than the neutral midpoint of 3.00 ($p < .001$ for all tests). Therefore, all four hypotheses were supported by the data. The observed mean differences (Mean – 3.00) indicated significantly favourable perceptions regarding the role of IBC in NPA reduction, recovery effectiveness, timeliness and efficiency of resolution, and improvement in bank performance following IBC outcomes. The effect sizes were large, indicating strong practical significance within the study sample.

Summary of findings from analysis

The respondent profile demonstrated adequate representation across bank categories, districts, designations, and functional roles linked to NPA and IBC operations. The construct-level descriptive statistics indicated favourable perceptions for IBC effectiveness in Kerala, with comparatively lower (but still positive) perceptions for timeliness. Hypothesis testing confirmed statistically significant support for IBC effectiveness in relation to NPA reduction, recovery outcomes, resolution timeliness, and post-resolution performance improvement.

Discussion of the Results

The analysis indicated an overall favourable assessment of the Insolvency and Bankruptcy Code as a mechanism for resolving NPAs among banks operating in Kerala. Across the four core constructs aligned with the hypotheses, the mean scores remained above the neutral midpoint of the scale, and the hypothesis tests showed statistically significant support for each proposition. This pattern suggested that, within the operational context reflected by the respondents, banking officials reported favourable perceptions regarding the role of IBC in NPA resolution and related operational outcomes.

The findings related to NPA reduction showed the strongest support. Respondents reported favourable perceptions that IBC supported reduction of the NPA burden, facilitated quicker internal decision-making on stressed assets, and discouraged repeated restructuring of chronic default accounts. This result was consistent with the view that IBC strengthened the credibility of formal enforcement and provided an institutional pathway for resolution with defined procedural stages. In the Kerala banking context, this perception also implied that IBC functioned not merely as a legal process but as an operational trigger that supported early settlement behaviour, improved coordination among internal departments, and encouraged more systematic provisioning and valuation practices.

The recovery effectiveness construct also recorded strong support, indicating that respondents reported favourable perceptions regarding recovery effectiveness under IBC. The results implied that the structured process of resolution and the involvement of resolution applicants were perceived as improving the likelihood of value realisation from stressed assets. The positive assessment further suggested that respondents viewed creditor coordination and case management under IBC as relatively more predictable in planning recoveries for larger stressed accounts. In practical terms, these perceptions indicated that IBC was viewed as a structured route that could reduce uncertainty in recovery planning and improve confidence in resolution outcomes.

The timeliness and efficiency dimension, while positive, recorded the lowest mean among the four effectiveness-related constructs. This outcome suggested that respondents recognised the time-bound intent of IBC, but also perceived that delays continued to occur in practice. Such delays were likely linked to procedural requirements, litigation and appeals, tribunal capacity constraints, valuation disputes, and the complexity of creditor coordination in Committee of Creditors processes. Therefore, the Kerala results reflected a balanced perception: timeliness and efficiency were viewed favourably overall, but this dimension appeared to require further strengthening to better realise consistent time-bound closure across cases.

The results further showed that IBC outcomes were associated with favourable perceptions of improvement in bank performance indicators such as net NPA position, provisioning adequacy, and profitability-related benefits through reduced credit losses. This finding implied that respondents perceived a linkage between resolution outcomes and balance-sheet strengthening. The reported improvements in portfolio quality and operational efficiency indicated that closure of large and long-pending NPAs reduced recurring administrative effort, supported internal risk management practices, and encouraged better credit discipline. In the Kerala context, this performance-oriented perception also reflected the operational benefit of freeing managerial and recovery resources from legacy cases, thereby supporting more focused monitoring of new and emerging stress.

The implementation challenges and support responses were moderate, indicating that respondents acknowledged operational constraints while also recognising the presence of institutional support to manage IBC processes. The pattern suggested that barriers such as internal capability gaps, tribunal capacity issues, coordination difficulties among lenders, and disputes affecting valuation and resolution quality remained relevant. At the same time, the moderate levels of agreement on internal training, clarity of procedures, and adequacy of monitoring systems suggested that banks had developed mechanisms to manage IBC work, though such mechanisms were not perceived as uniformly strong across all banks and respondent categories. The Kerala results therefore pointed to implementation quality as a factor shaping perceived effectiveness in practice.

Overall, the discussion indicated that banking officials reported significantly favourable perceptions regarding IBC's role in NPA reduction, recovery effectiveness, timeliness and efficiency of resolution, and improvement in bank performance following IBC outcomes. However, the comparatively lower assessment of timeliness and the presence of operational challenges indicated that improvements in institutional capacity, process standardisation, and procedural streamlining could further strengthen the effectiveness of IBC implementation among banks operating in Kerala.

Implications of the Study

The findings implied that the Insolvency and Bankruptcy Code served as a relevant and operationally meaningful framework for NPA resolution among banks operating in Kerala. From a banking operations perspective, the positive perceptions across NPA reduction, recovery effectiveness, and performance improvement indicated that banks could continue to use IBC not only as a legal remedy for chronic defaults but also as a strategic component of stressed asset management. The results implied that structured escalation to IBC, when applied to appropriate accounts, strengthened internal recovery planning, encouraged settlement behaviour, and contributed to balance-sheet clean-up through faster closure of large stressed exposures.

The study carried implications for internal policy and process design within banks. Since respondents perceived improved coordination and decision-making around IBC cases, banks

could institutionalise standard operating procedures that integrate early warning systems, credit monitoring triggers, legal preparedness, and resolution strategy formulation. In particular, documentation readiness and timely internal approvals emerged as practical requirements for achieving better outcomes. The results implied that strengthening internal workflows for case identification, admission preparation, and Committee of Creditors participation could further enhance resolution efficiency and value realisation.

The findings also implied that human resource capacity and specialised expertise were important for effective implementation. Moderate perceptions regarding challenges suggested the need for targeted capacity building in credit recovery teams, legal cells, and stressed asset management units. Training programmes focusing on insolvency processes, valuation interpretation, resolution plan evaluation, and stakeholder coordination could improve the quality of decision-making within banks. Strengthening internal expertise would also reduce dependence on external intermediaries for routine case handling and would improve consistency in managing IBC cases across branches and regions within Kerala.

From a regulatory and institutional standpoint, the results implied that the perceived benefits of IBC could be strengthened by improving the timeliness dimension. As time-bound resolution was viewed positively but less strongly than other outcomes, the study implied a need for system-level improvements in tribunal capacity, procedural streamlining, and faster handling of litigation and appeals. Enhancing infrastructure and administrative capacity within adjudicating institutions would improve the credibility of IBC's time-bound intent, thereby reinforcing both recovery expectations and borrower discipline.

The study also carried implications for credit appraisal and risk governance. Perceived improvements in performance indicators and credit discipline implied that experience with IBC encouraged banks to adopt more prudent lending practices and stronger monitoring. Practical improvements could include tighter borrower due diligence, stronger collateral evaluation, clearer covenant structures, more frequent monitoring of early stress signals, and improved provisioning discipline. The results implied that IBC was not merely a recovery tool but also a mechanism that shaped lender behaviour towards stronger risk management practices in the Kerala banking context.

Finally, the study implied that bank-level strategic planning could incorporate differentiated recovery pathways. Since timeliness and operational challenges were not perceived uniformly strong, banks could refine internal criteria for selecting IBC versus other recovery mechanisms depending on account size, asset complexity, borrower behaviour, and expected time-to-resolution. Such a calibrated approach would enable banks operating in Kerala to maximise value realisation, reduce avoidable delays, and allocate recovery resources more efficiently while leveraging IBC as an anchor framework for resolving high-impact stressed assets.

Conclusion

The study concluded that the Insolvency and Bankruptcy Code was perceived by banking officials in Kerala as an effective framework for addressing Non-Performing Assets, with respondents reporting favourable outcomes in terms of NPA reduction, recovery effectiveness, and improvement in bank performance following IBC-based resolutions. The results also indicated that the timeliness and efficiency of resolution under IBC were viewed positively, though less strongly than other effectiveness dimensions, suggesting that procedural and institutional constraints continued to influence time-bound closure in practice. Overall, the evidence supported the view that IBC functioned as a credible and structured resolution pathway for stressed assets in the Kerala banking context, while also implying that

improvements in process capacity, coordination, and institutional support could further strengthen its effectiveness.

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