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Timing Matters: Creditor Incentives and Delayed Admission under India's IBC

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ABSTRACT

This paper examines how different classes of creditors use India's Insolvency and Bankruptcy Code (IBC), with a focus on the timing of insolvency initiation. Using a novel dataset that combines firm-level IBC admission records with financial data, we compare the characteristics of firms referred to IBC by financial creditors (primarily banks) and operational creditors. We find a systematic divergence. Firms brought to the IBC by financial creditors are significantly more stressed and highly leveraged—not only at the point of admission, but for several years prior. In contrast, firms referred by operational creditors are relatively less distressed and do not exhibit the same degree of pre-admission deterioration. These patterns persist across time and across bank types, and become more pronounced in the post-Covid period. This divergence points to a misalignment in creditor incentives, with important implications for the effectiveness of the IBC. More broadly, the results highlight that the success of a time-bound insolvency regime depends not only on resolution outcomes, but critically on the timing of entry into the process.

Keywords: Corporate insolvency, Creditor incentives, Creditor heterogeneity, Firm distress, IBC effectiveness

JEL Code: G33, G21, K22

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Abstract

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1 Introduction

A central objective of modern bankruptcy regimes is to facilitate the timely resolution of financial distress. When firms become economically unviable, delays in initiating insolvency proceedings can lead to substantial value destruction, as assets deteriorate, relationships unravel, and coordination failures among claimants intensify. This phenomenon—often described as the "melting ice-cube" problem—underscores the importance of early recognition of distress and prompt referral to formal resolution mechanisms (Aghion and Moore, 1994; Hart, 2000).

In India, the Insolvency and Bankruptcy Code (IBC), enacted in 2016, was explicitly designed to address these concerns by creating a time-bound, creditor-in-control resolution framework. The IBC was introduced against the backdrop of a large overhang of non-performing assets (NPAs) in the banking system and a legacy of ineffective and protracted recovery mechanisms (Reserve Bank of India, 2019). By consolidating disparate insolvency processes into a unified framework and imposing strict timelines, the IBC sought to alter creditor incentives toward earlier and more coordinated action (Sengupta et al., 2018).

However, the effectiveness of IBC depends not only on the statutory design but also on how different classes of creditors choose to use it. In particular, the IBC distinguishes between financial creditors (FCs)—primarily banks and other regulated lenders—and operational creditors (OCs), such as trade creditors and suppliers. These creditor classes differ systematically in their regulatory environment, access to alternative recovery mechanisms, and exposure to distressed firms. These differences, in turn, are likely to shape their incentives to recognise distress and initiate insolvency proceedings (Hart and Moore, 1998; Djankov et al., 2008).

In this paper we study how these two classes of creditors, especially banks, use the IBC in practice. Using a novel dataset that merges information on firm-level admission into IBC from the Insolvency and Bankruptcy Board of India (IBBI) with financial data from the CMIE Prowess database, we examine the characteristics of firms admitted into the Corporate Insolvency Resolution Process (CIRP) between 2017 and 2024. By tracking firm-level indicators of financial stress and indebtedness up to three years prior to IBC admission, we provide a dynamic comparison of the types of firms brought into the insolvency process by financial and operational creditors.

Our main finding is that financial creditors, especially banks, systematically refer significantly more stressed and more indebted firms to the IBC than operational creditors. Firms

brought in by banks exhibit lower interest coverage ratios and higher leverage not only at the point of admission but also in the years leading up to it. Moreover, the financial condition of these firms deteriorates sharply as they approach insolvency, suggesting that banks delay referral until distress becomes acute. In contrast, firms referred by operational creditors appear to be relatively less distressed and do not exhibit the same pronounced deterioration prior to admission.

This pattern is also consistent across different cohorts of firms being referred to the IBC between 2017 and 2024 and infact gets worse in the post-pandemic period. In particular, operational creditors appear to refer relatively less stressed firms to the IBC in recent years, while financial creditors continue to bring in firms that are deeply and persistently distressed. This suggests that, even as the IBC matures and the initial stock of legacy NPAs is resolved, banks do not transition toward earlier referral of incipient stress.

We further show that this pattern is robust across different segments of the banking system. We find no meaningful differences in referral behaviour between banks that were subject to the Reserve Bank of India's Prompt Corrective Action (PCA) framework and those that were not, nor between public and private sector banks. This suggests that the observed behaviour reflects systemic features of the banking sector's engagement with the IBC-particularly with respect to the timing of referral, rather than the balance sheet conditions or ownership structure of specific banks.

Taken together, these findings point to a pattern of misaligned incentives in the use of the IBC. Banks appear to delay the recognition and resolution of distress, before eventually referring deeply stressed firms to insolvency. Operational creditors, by contrast, appear to use the IBC in a more timely manner, potentially as a means of enforcing payment or strengthening their bargaining position. The result is a dual-use equilibrium in which the same institutional framework is deployed at different stages of distress by different types of creditors.

Our paper relates to three strands of the literature. First, it contributes to the large theoretical and empirical literature on bankruptcy and financial distress, which emphasises the importance of timely intervention to preserve firm value and mitigate inefficient liquidation (Aghion and Moore, 1994; Hart and Moore, 1998; Hart, 2000). A central insight in this literature is that coordination failures and incentive misalignment among stakeholders can lead to delayed resolution and value destruction.

Second, it adds to the growing body of work on creditor heterogeneity, which highlights how differences in information, bargaining power, and regulatory constraints shape creditor

behavior and recovery outcomes (Djankov et al., 2008). In particular, financial creditors such as banks differ fundamentally from trade and operational creditors in their monitoring capacity, contractual structures, and regulatory environment.

Third, it relates to the emerging empirical literature on the IBC and bankruptcy reforms in emerging markets such as India. Existing work has largely focused on aggregate recovery rates, resolution timelines, and macro-level effects of the reform (Sengupta et al., 2018; Sengupta and Vardhan, 2023). In contrast, relatively little is known about the selection of firms into insolvency and how this varies across creditor types. By focusing on admission-stage differences, we provide new evidence on how institutional design and creditor incentives can jointly shape the functioning of the insolvency regime.

These findings contribute to the overarching literature on bankruptcy design and creditor behavior by highlighting how heterogeneous incentives across creditor classes shape the selection of firms into formal insolvency. The results also have important policy implications for the functioning of the IBC, particularly with regard to early stress detection and timely resolution.

The rest of the paper is structured as follows. Section 2 provides institutional background on creditor recovery mechanisms in India and the design of the IBC. Section 3 describes the data and empirical strategy. Section 4 presents the main empirical results, including dynamic evidence on firm stress prior to IBC admission and heterogeneity across bank types. Section 5 discusses the implications of our findings. Section 6 concludes.

2 Institutional Context and Creditor Incentives

2.1 Financial Distress, Delay, and Value Destruction

A useful starting point for understanding insolvency systems is the nature of the firm itself. A firm can be viewed as a nexus of contracts among different stakeholders—equity holders, creditors, employees, and suppliers—embodying both tangible assets and organisational capital. When a firm becomes financially distressed, value erosion sets in along two dimensions. First, there is a decline in observable economic value—profits, cash flows, and the ability to service debt. Second, and more subtly, implicit contractual arrangements between the firm and its stakeholders begin to unravel. In these circumstances, delays in resolving the financially distressed firm can generate significant inefficiencies. As the firm approaches insolvency, conflicts among stakeholders intensify: equity holders have

incentives to undertake risk-shifting or engage in value diversion, while creditors may act in a fragmented manner to protect their individual claims. In the absence of coordination, this can lead to inefficient liquidation or prolonged distress, both of which erode firm value (Bolton and Scharfstein, 1996; Hart, 2000).

More specifically, as distress deepens, informational asymmetries between insiders and creditors become central. Equity holders are typically the first to observe deterioration in firm performance and, once insolvency looms, may have incentives to extract residual value through asset stripping or preferential transactions. This initiates a downward spiral in which the firm's asset base erodes, its repayment capacity declines, and creditor recoveries worsen. In response, creditors may engage in a "race to recover," enforcing claims independently and thereby further destroying value. This dynamic underpins the characterisation of distressed firms as "melting ice-cubes," where delays in coordinated resolution lead to rapid and irreversible losses.

The key policy implication is that timely recognition of distress and prompt intervention are essential for preserving value. Indeed, effective insolvency regimes hinge on timely action along four margins: (i) early recognition of stress, (ii) prompt referral to a formal resolution mechanism, (iii) timely admission into the process, and (iv) swift resolution. While the IBC explicitly codifies timelines for admission and resolution, the first two margins depend on creditor incentives and behaviour. In the Indian context, where legal provisions such as strict obligations on directors to initiate insolvency are limited, the burden of stress recognition and initiation lies disproportionately with creditors. However, the incentives to act early are not uniform across creditors and depend critically on institutional design and the nature of creditor claims.

2.2 The Pre-IBC Recovery Landscape in India

Prior to the the enactment of the IBC, India's creditor recovery landscape was fragmented and uneven across creditor classes. Banks, which used to account for 70% of the total commercial (non-government) credit in India in the 2005-2015 period, had access to multiple specialised recovery mechanisms. These included the Debt Recovery Tribunals (DRTs) under the Recovery of Debts Due to Banks and Financial Institutions Act (RDDBI), 1993, and the SARFAESI Act, which allowed secured creditors to enforce collateral without court intervention. In addition, the Reserve Bank of India (RBI) introduced a series of restructuring schemes, such as Corporate Debt Restructuring (CDR), Strategic Debt Restructuring (SDR), and the Scheme for Sustainable Structuring of Stressed Assets (S4A), aimed at resolving

stressed loans within the banking system.

Despite this institutional infrastructure, recovery outcomes remained weak and resolution timelines were excessively long (Acharya et al., 2017). Importantly, these mechanisms often enabled banks to postpone the recognition of distress through repeated restructuring or evergreening of loans. Regulatory forbearance, coupled with concerns about provisioning and capital adequacy, created incentives for banks to delay loss recognition and defer decisive resolution.

In contrast, operational creditors—such as suppliers, service providers, and other trade creditors—had access to far more limited enforcement mechanisms. Their primary recourse lay in civil litigation under contract law, which was typically slow, costly, and uncertain. As documented in cross-country evidence, weak contract enforcement environments tend to reduce recovery rates and prolong disputes (Djankov et al., 2008). In the Indian context, this implied that operational creditors had limited ability to recover dues through existing channels, strengthening their incentives to seek alternative mechanisms for timely enforcement.

2.3 The Design of the IBC

The IBC was introduced as a comprehensive reform to address these deficiencies. It consolidated multiple insolvency frameworks into a single, creditor-driven process with clearly defined timelines. Upon admission into the Corporate Insolvency Resolution Process (CIRP), control of the firm shifts from the debtor to a Committee of Creditors (CoC), composed primarily of financial creditors. The CoC is empowered to make key decisions regarding the resolution or liquidation of the firm, subject to time-bound procedures.

A notable feature of the IBC is that it allows both financial and operational creditors to initiate insolvency proceedings. However, the two classes differ in their roles within the process. While financial creditors exercise voting rights and control through the CoC, operational creditors have more limited participation rights. This asymmetry reflects differences in the nature of their claims but also has implications for their incentives to trigger the insolvency process.

Crucially, while the IBC enforces strict timelines after admission, it does not directly regulate the earlier stages of distress recognition and referral. The decision of when to initiate insolvency proceedings remains with creditors, and is therefore shaped by their respective incentives, constraints, and outside options.

2.4 Creditor Heterogeneity and Incentive Differences

Financial and operational creditors differ along several dimensions that are central to understanding their behaviour under the IBC.

First, financial creditors—especially banks—operate under a regulatory framework that governs asset classification, income recognition, provisioning for bad loans, and capital adequacy. Early recognition of distress can impose immediate costs in the form of higher provisioning requirements and potential capital constraints. This can potentially create incentives to delay the formal recognition of non-performing assets and to rely on restructuring or other mechanisms before resorting to a formal insolvency framework (Acharya et al., 2019).

Second, banks often lend as part of syndicates or consortia, particularly for large borrowers. Coordination among multiple lenders can be complex, and collective decision-making may be slow. Such coordination problems can further delay referral to formal insolvency mechanisms (Bolton and Scharfstein, 1996).

Third, banks typically have access to a wider set of recovery options outside the IBC, including collateral enforcement under SARFAESI and negotiated restructuring. These alternatives may be preferred in earlier stages of distress, with the IBC being used as a last resort when other mechanisms fail.

In contrast, operational creditors face a very different set of incentives. Trade credit is usually short-term and closely linked to ongoing business operations. Delayed payments can create immediate liquidity pressures for these creditors, particularly for smaller firms. Given their limited access to effective enforcement mechanisms outside the IBC, operational creditors may have stronger incentives to initiate insolvency proceedings earlier, either to recover dues or to exert pressure on the debtor.

These differences imply that financial creditors are more likely to delay referral to the IBC until distress becomes severe, while operational creditors may use the IBC at earlier stages of distress.

2.5 Testable Implications

The above institutional and theoretical considerations yield clear testable hypotheses. If financial creditors delay recognition and referral, then firms brought to the IBC by these creditors should be more severely stressed and more highly leveraged at the time of admis-

sion. Moreover, such firms should exhibit a pattern of deteriorating financial health in the years leading up to insolvency.

Conversely, if operational creditors initiate insolvency proceedings earlier, firms referred by them should be relatively less distressed at admission and may not display the same degree of pre-admission deterioration.

The empirical analysis that follows tests these predictions using firm-level data on IBC admissions merged with financial information from the CMIE Prowess database.

3 Data and Empirical Strategy

3.1 Data Sources

Our empirical analysis combines two primary data sources: (i) firm-level insolvency data from the Insolvency and Bankruptcy Board of India (IBBI), and (ii) firm-level balance sheet information from the CMIE Prowess database.

The IBBI data contains public announcements regarding the referral of specific firms to the CIRP process by different kinds of creditors. These announcements provide information on the initiation of insolvency proceedings, including the identity of the debtor, the applicant creditor, and the date of admission. We treat these public announcements as a proxy for entry into the CIRP, which marks the formal initiation of the IBC process.

The second dataset is the Prowess database, which contains detailed financial statements of Indian firms. We extract annual balance sheet and income statement variables for the period FY2013–FY2024. This database allow us to construct measures of firm-level financial stress, indebtedness, and size.

The two datasets are merged using the Corporate Identification Number (CIN), which uniquely identifies firms across both sources. We restrict attention to firms with valid CINs and non-missing financial information. The final merged dataset consists of firms admitted to CIRP between 2017 and 2024 for which financial data are available in Prowess.

3.2 Sample Construction

We begin with the universe of IBBI public announcements up to May 31, 2025. After removing duplicate entries, and observations with missing or invalid identifiers, we obtain a cleaned sample of CIRP admissions.

We then merge this dataset with Prowess using CIN codes. As is typical in such merges, a substantial fraction of firms cannot be matched due to differences in coverage, particularly for smaller firms. The resulting sample represents a subset of IBC cases for which reliable financial information is available in Prowess.

We focus on firms admitted to CIRP between 2017 and 2024. The IBBI-Prowess merged dataset contains 2,265 firms, of which 1,887 correspond to CIRP cases up to 2024 (see Table 1). This represents approximately 5 percent of firms in the Prowess database. We then construct a panel of firm-year observations spanning up to three years prior to admission. This allows us to examine the evolution of firm characteristics leading up to insolvency.

A key variable in our analysis is the identity of the applicant creditor. Using the applicant name in the IBBI data, we classify cases into two categories:

- Financial creditors (FCs): primarily banks and other RBI-regulated financial institutions such as non-banking finance companies (NBFCs)
- Operational creditors (OCs): all other creditors, including trade creditors, suppliers, and service providers

This classification enables a comparison of the types of firms brought into the IBC by different creditor classes. Our sample comprises 118 unique financial creditors, of which 51 are banks and 67 are NBFCs (see Table 2). In addition, we identify 1,067 unique operational creditors. Table A.3 in the Appendix presents the year-wise distribution of creditors across these categories that have initiated CIRP proceedings. Table 3 reports the year-wise distribution of cases across creditor types. Notably, banks account for approximately 85% of all the CIRP cases in our sample (2017-2024) initiated by financial creditors in our sample. Given this dominance, we use the terms financial creditors and banks interchangeably in the analysis that follows. Table A.6 in the Appendix shows the distribution of bank-wise IBC cases in our sample by the year of referral.

3.3 Variable Definitions

We construct the following key variables from the Prowess data:

Financial Stress

- **Interest Coverage Ratio (ICR)**: defined as the ratio of profits before depreciation, interest, taxes, and amortisation (PBDITA) to interest expenses. Lower values of ICR indicate greater financial stress, with values below one suggesting difficulty in servicing interest obligations.

Indebtedness

- **Leverage**: defined as the ratio of total debt to total assets. Higher leverage reflects greater indebtedness and financial vulnerability.

Bank Exposure

- **Share of Bank Borrowing**: defined as the ratio of bank borrowings (short-term plus long-term) to total debt. This variable captures the extent of reliance on bank financing.

Firm Size measured as the logarithm of total assets.

All variables are constructed on an annual basis. To mitigate the influence of extreme values, we winsorise a few variables containing outlier values (Total Assets, PBDITA, Interest Expense, Debt, and Bank Borrowings) at a 1% threshold. Table 4 shows the year-wise distribution of size of firms referred by the two main creditor categories. For all years, firms referred by financial creditors are bigger as shown by both the mean and median values of log of total assets.

3.4 Empirical Strategy

Our empirical approach is primarily descriptive, aimed at documenting systematic differences in the characteristics of firms brought to the IBC by financial and operational creditors. The analysis proceeds in three steps.

1. Cross-sectional comparison at admission:
   We begin by comparing the financial characteristics of firms at the time of IBC admission (year $t = 0$) across creditor types. Specifically, we examine differences in ICR, leverage, and bank exposure between firms referred by financial creditors and those referred by operational creditors.
   This provides a baseline assessment of whether the two creditor classes bring systematically different types of firms into the insolvency process.

2. Dynamic analysis of pre-admission characteristics:
   To examine the evolution of firm financial stress in the run-up to the referral, we track firm financial characteristics for three years leading up to IBC admission. For each firm, we construct a panel covering the admission year (year $t = 0$) and up to three years prior ($t = -1, -2, -3$).
   We then compare the evolution of ICR and leverage across creditor types over this horizon. If financial creditors delay referral, we would expect firms referred by them to exhibit both (i) lower levels of financial health and (ii) sharper deterioration as the admission year approaches.

3. Cohort and subsample analysis:
   To assess the robustness of our findings, we conduct the analysis across different admission cohorts (2017–2024) as well as across sub-samples of creditors. In particular, we examine whether the observed patterns vary across:

   - Banks under the Prompt Corrective Action (PCA) framework versus non-PCA banks
   - Public versus private sector banks
     This allows us to distinguish between creditor-specific behaviour and broader, system-wide patterns in the use of the IBC.

Our empirical strategy provides systematic evidence on the relationship between creditor type and the timing of insolvency referral. The combination of cross-sectional and dynamic comparisons allows us to infer whether differences in firm characteristics are consistent with delayed recognition by financial creditors and earlier intervention by operational creditors.

4 Results

4.1 Baseline Differences at Admission

We begin by comparing the financial characteristics of firms at the time of admission into the CIRP across creditor types. Two key patterns emerge.

First, firms referred by financial creditors are significantly more financially stressed than those referred by operational creditors. This is reflected in systematically lower ICR for financial creditor–initiated cases as shown in Table 5. In many instances, median ICR for these firms is close to or below 1, indicating an inability to service interest obligations from operating earnings.

Second, firms brought in by financial creditors are more leveraged. The ratio of total debt to total assets is consistently higher for these firms relative to those referred by operational creditors as shown in Table 6. This suggests that financial creditors tend to initiate insolvency proceedings for firms with substantially greater debt overhang. We observe a similar pattern for the share of bank borrowing in total debt. As shown in Table 7, both the average and median share of bank borrowings is consistently higher for firms referred to the IBC by financial creditors compared to those referred by operational creditors. This suggests that banks continued to extend credit to these firms even if their ability to service debt was weak as shown in Table 5.

Taken together, these results indicate that financial creditors bring more severely distressed and more indebted firms into the IBC process compared to operational creditors.

4.2 Pre-admission dynamics: Evidence of delayed referral

To examine whether these differences also existed prior to IBC referrals, we analyse the evolution of firm characteristics in the years leading up to CIRP admission. Specifically, we track ICR and leverage over a 3-year window prior to admission and report the results in Table 8.

A clear divergence emerges between the two creditor groups. For firms referred by financial creditors, financial stress is both persistent and worsening over time. Median ICR declines steadily as the admission year approaches, indicating a progressive deterioration in the firm's ability to service debt. At the same time, leverage increases, suggesting a buildup

of debt relative to assets in the run-up to insolvency.

In contrast, firms referred by operational creditors exhibit a markedly different pattern. While these firms may experience some degree of financial stress, their ICR remains relatively higher, and the deterioration in financial health is less pronounced during the 3-year period before referral. Similarly, leverage levels are lower and do not display the same upward trajectory prior to admission.

These dynamic patterns suggest that financial creditors delay referral to the IBC until firms reach a state of acute distress. Operational creditors, by contrast, appear to initiate proceedings at earlier stages of distress, before financial conditions deteriorate to the same extent.

4.3 Cohort Analysis

We next examine whether these divergences between financial and operational creditors attenuate over time by studying different admission cohorts for the period 2017–2024. This is particularly relevant given that the early years of the IBC may have been characterised by the resolution of legacy stressed assets.

In Figures 1 and 2, we plot the median ICR and median leverage ratio respectively, across IBC admission cohorts from 2017 to 2024, for three years prior to admission (i.e. $T = -3, -2, -1, 0$) and we show this for firms referred by financial creditors and operational creditors. The figures show that the observed differences are not confined to early cohorts. Across all admission years, firms referred by financial creditors consistently exhibit lower ICR and higher leverage relative to those referred by operational creditors and this pattern becomes more pronounced in the post-Covid period. The dynamic pattern of worsening financial health prior to admission for financial creditor–referred firms also remains intact across cohorts.

If the initial years of the IBC primarily reflected a backlog of legacy NPAs, one would expect these differences to attenuate over time. The persistence of these patterns even in the post-pandemic period suggests that the delayed referral behaviour of financial creditors is not merely a transitional phenomenon but reflects a more structural feature of creditor incentives.

4.4 Bank-Level Heterogeneity

To examine whether banks' own financial stress influenced the timing of insolvency referrals, we exploit variation arising from the RBI's Prompt Corrective Action (PCA) framework. In 2017-18, RBI placed several banks under the PCA framework and these banks were subject to significant lending restrictions due to weak balance sheets, characterised by low capital adequacy and high levels of NPAs. Figure 3 shows the overall distribution of bank-triggered IBC cases in our sample by categories of PCA and non-PCA banks. TableA.4 in the Appendix gives the year-wise distribution of these IBC cases across PCA, and non-PCA banks. Table A.7 shows the distribution of bank-wise IBC cases in our sample by the year of referral by PCA and non-PCA banks.

PCA banks faced strong incentives for capital preservation and balance sheet repair. If the IBC offered a credible mechanism for relatively quick and value-preserving resolution, we would expect these banks to make use of it at earlier stages of distress, in order to resolve bad loans quickly and recover a larger share in order to clean up their balance sheets. By contrast, non-PCA banks, operating under fewer constraints, may have had less urgency to initiate insolvency proceedings.

Motivated by this reasoning, we examine whether PCA banks refer firms to the IBC at earlier stages of distress relative to non-PCA banks. Specifically, we compare the ICR and leverage ratios of firms referred by PCA banks and non-PCA banks, and examine the evolution of these stress indicators prior to admission.

Table 9 shows the average and median ICR and leverage ratios of firms referred to IBC by all banks as well as PCA and non-PCA banks, over a 3-year window prior to admission. We do not find systematic evidence in support of our hypothesis. Firms referred by PCA banks are mostly similar in terms of financial stress and leverage to those referred by non-PCA banks, and exhibit comparable patterns of deterioration in the years leading up to admission. While firms referred to by PCA banks do exhibit lower ICR values, they also have lower leverage ratios than firms referred by non-PCA banks. In general, both groups of banks tend to refer firms that are already highly stressed, with worsening financial conditions as the admission year approaches.

One possible explanation could be that PCA banks were already burdened with a large stock of legacy NPAs, which had remained unresolved for extended periods. In such cases, the marginal benefit of initiating insolvency—particularly in a relatively new framework with uncertain outcomes—may have been perceived as limited. As a result, even constrained banks appear to have delayed referral, waiting until firm distress became acute before re-

sorting to the IBC. This suggests that the tendency to postpone insolvency initiation documented in the previous sections, is not driven solely by bank-specific financial constraints, but reflects broader system-wide features of how banks engage with the IBC.

We further examine whether ownership structure of banks influences referral behaviour by comparing public and private sector banks. Public sector banks have historically exhibited higher levels of NPAs than private banks. This would suggest stronger incentives for earlier use of the IBC as a tool for balance sheet repair. To examine this, we compare referral patterns across ownership types. Table A.5 in the Appendix presents the year-wise distribution of IBC cases in our sample across private banks, public sector banks, and non-SBI public sector banks.[1]

Table 10 reports the average and median ICR and leverage of firms referred to the IBC by all banks, as well as by public and private banks separately, over a three-year window prior to admission. We not find any evidence that despite higher levels of NPAs and weaker capital positions, public sector banks refer firms to the IBC earlier than private banks. Firms referred by both public and private banks display comparable levels of stress and indebtedness, and follow similar pre-admission trajectories. Interestingly, when we compare private banks with non-SBI public sector banks, we find that firms referred by the latter are even more financially stressed. Specifically, they exhibit lower ICR and higher leverage, both at the time of IBC admission and in the preceding years, relative to firms referred by private banks. This suggests that, once SBI is excluded, the remaining public sector banks exhibit even greater delays in referral, bringing more acutely distressed firms to the IBC compared not only to private banks but also to SBI.

Taken together, these findings reinforce the view that delayed referral is predominantly a systemic feature of banks' behaviour, rather than a function of individual bank balance sheet conditions.

4.5 Summary of findings

The empirical evidence yields three main findings.

First, financial creditors refer significantly more stressed and more indebted firms to the IBC than operational creditors. This difference is evident both at the point of admission and in the years leading up to it.

[1]We exclude the State Bank of India (SBI) to assess whether other public sector banks exhibit more pronounced delays in IBC referral, given SBI's relatively stronger balance sheet and financial stability.

Second, firms referred by financial creditors exhibit a clear pattern of worsening financial health prior to admission, consistent with delayed recognition and referral. In contrast, firms referred by operational creditors are relatively less distressed and do not exhibit the same degree of pre-admission deterioration. This divergence is more acute in the post-Covid period.

Third, these patterns are robust across time and across different categories of banks, including PCA versus non-PCA banks and public versus private sector banks. This suggests that the observed behaviour reflects systemic incentive structures rather than idiosyncratic characteristics of specific creditor groups.

Overall, the results provide empirical support for the hypothesis that financial and operational creditors use the IBC at different stages of distress.

5 Interpretation: Misaligned Creditor Incentives and the Timing of IBC Referral

A natural interpretation of our results is that banks use the IBC as a mechanism of last resort. Unlike operational creditors, banks have access to multiple channels for dealing with stressed borrowers before initiating formal insolvency. These include restructuring frameworks, regulatory forbearance, out-of-court negotiations, and collateral enforcement mechanisms. The availability of these alternative mechanisms could be causing the banks to postpone referral to the IBC. In such a setting, the IBC is not the first instrument used to address incipient stress, but the terminal stage in a longer and more delayed resolution process.

Another possible explanation for the persistence—and subsequent intensification—of delayed referral by banks relates to the evolution of the IBC itself. In the initial years following its introduction, banks were burdened with a large stock of legacy NPAs that had accumulated over several years. Given the novelty of the IBC and the uncertainty surrounding its outcomes, banks may have been reluctant to rely on it as an early-stage resolution mechanism. Instead, they appear to have delayed referral, waiting to observe how the framework performed in practice before deploying it more actively.

Over time, this behaviour may have given rise to a reinforcing dynamic. As banks continued to refer only the most acutely distressed firms to the IBC, recovery outcomes within the process were correspondingly weak. Observing these outcomes, banks may have become even

more hesitant to use the IBC for newly emerging NPAs, further delaying referral and thereby exacerbating the initial problem. This creates a form of adverse feedback loop: delayed entry leads to poorer recoveries, which in turn discourages earlier use of the mechanism.

A third mechanism could be creditor coordination. Large distressed firms typically borrow from multiple banks or lending consortia. Coordinated action in such settings is costly and slow, especially when lenders differ in exposure, security interests, and recovery expectations. Formal insolvency may therefore be delayed not because individual lenders are unaware of borrower distress, but because collective movement into a common resolution process is difficult. The fact that similar patterns are observed across PCA and non-PCA banks, and across public and private banks, suggests that such frictions may be embedded in the structure of bank lending more generally, rather than being confined to weak institutions.

In contrast, operational creditors appear to have engaged with the IBC in a different manner potentially because they face a different incentive environment. Their claims are typically smaller, shorter-term, and tied to ongoing transactions. They also have limited access to alternative recovery channels comparable to those available to banks. As a result, once payment default occurs, the cost of waiting may be relatively high and the benefits of delay relatively low. For these creditors, the IBC may serve both as an active recovery mechanism and as a bargaining tool: the threat of insolvency itself can be used to induce payment or settlement. This may explain why operational creditors appear to trigger the IBC at earlier stages of distress, including in cases where firms are not yet as deeply impaired as those referred by banks.

This raises an important point about the dual use of the IBC. The Code was designed as a collective resolution mechanism for financially distressed firms, with an emphasis on preserving going-concern value through timely intervention. But our findings suggest that, in practice, different creditor classes use the same framework for different purposes. Banks appear to use it late, after distress has become severe. Operational creditors appear to use it earlier, at least in part as an enforcement device. The result is a form of institutional dualism: the same insolvency law functions as a delayed resolution mechanism for one class of creditors and as a relatively prompt claims-enforcement mechanism for another.

This divergence has important implications for the performance of the IBC. If banks refer firms too late, then a substantial share of cases may enter CIRP only after much of the underlying enterprise value has already eroded. In that event, even a well-designed time-bound insolvency process cannot fully recover the losses caused by pre-admission delay. Put differently, the efficiency of the IBC depends not only on what happens after admission, but also on when admission occurs. A regime can be procedurally time-bound and yet

economically tardy if the firms entering it have already passed the point at which value-preserving resolution is feasible.

The findings also suggest that some of the burden of timely referral may have shifted to operational creditors. In a setting where banks delay action, trade creditors and other non-financial claimants may be the first to force firms into the insolvency process. This may generate beneficial discipline in some cases, but it is not obvious that operational creditors are best placed to determine the socially efficient timing of insolvency initiation. Their incentives are shaped by immediate payment recovery rather than by the broader objective of maximising firm value across all stakeholders.

These results point to a broader lesson about insolvency reform. The introduction of a modern bankruptcy code can improve post-admission coordination and resolution, but it does not automatically solve pre-admission incentive problems. Where financial creditors retain incentives to delay stress recognition, the gains from bankruptcy reform may be substantially diluted. In this sense, the effectiveness of insolvency law is inseparable from the surrounding architecture of creditor incentives, bank regulation, and debt recovery institutions.

5.1 Way Forward

While the analysis in this paper documents clear and robust patterns in how different creditors use the IBC, it leaves open important questions about the underlying drivers of these behaviors. We show that financial creditors bring more severely stressed firms to the IBC, tend to do so later in the distress cycle, and that this divergence relative to operational creditors persists across cohorts and becomes more pronounced in recent years. However, the precise mechanisms generating these patterns are not yet well understood.

It could be a combination of creditor incentives, availability of alternative resolution channels especially for banks, and coordination frictions among lenders. At this stage, these explanations are mere conjectures. A more complete understanding would require richer data—particularly on loan-level exposures, and restructuring or out-of-court settlement attempts prior to IBC admission, as well as empirical strategies that can more directly identify causal mechanisms.

This is an important direction for future research. As discussed earlier, the timing of insolvency initiation has first-order implications for value preservation and recovery outcomes. If banks systematically delay referral despite access to a time-bound resolution framework,

it raises questions about whether the broader institutional environment is aligned with the objectives of the IBC.

6 Conclusion

This paper studies how different classes of creditors use India's Insolvency and Bankruptcy Code (IBC), with a focus on the timing of insolvency initiation. Using firm-level data on IBC admissions matched with firm financial information, we document systematic differences in the types of firms brought into insolvency by financial and operational creditors.

We find that financial creditors—primarily banks—tend to refer firms that are more highly leveraged and significantly more distressed, not only at the point of admission but also in the years leading up to it. In contrast, firms referred by operational creditors are relatively less impaired. These patterns persist across time and across bank types, and do not diminish even as the IBC matures. If anything, the divergence becomes more pronounced in the post-Covid period.

The evidence points to a consistent timing asymmetry in the use of the IBC. Financial creditors appear to delay referral, while operational creditors initiate insolvency at relatively earlier stages of distress. The effectiveness of a time-bound insolvency framework, however, depends not only on the resolution process after admission, but critically on when firms enter the process.

These differences have important implications for both the functioning of the IBC and the broader objective of efficient resolution. Delayed referral by financial creditors may exacerbate value destruction, reduce recovery rates, and undermine the core objective of the insolvency framework.

Therefore, from a policy perspective, our findings underscore the need to strengthen incentives for early stress recognition and timely referral by financial creditors. This may require tighter regulatory discipline around asset classification, limiting prolonged restructuring without resolution, and improving coordination among lenders. Aligning the timing of IBC usage across creditor classes is essential for preserving firm value and improving the effectiveness of the regime.

More fundamentally, the central challenge is not only insolvency resolution, but insolvency timing. The IBC was intended to arrest the "melting ice-cube" dynamic through timely intervention. Yet the evidence suggests that banks often enter the process only after sub-

stantial value destruction has already occurred. Understanding why a unified insolvency framework is used differently across creditor classes—and why banks do not utilise it earlier—will be critical for improving both the design and effectiveness of India's bankruptcy regime.

7 Bibliography

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8 Figures & Tables

Table 1: IBBI and Prowess merged firm dataset

Stage	**Data loss**	**Total firms**
IBBI Public Announcement data	0	12,718
With valid CIN	549	12,169
Unique CIN	2,745	9,424
Merged with ProwessIQ	7,155	2,265
CIRP filed till 2024	378	**1,887**

Note: Out of 55,959 firms in Prowess, the merged dataset contains 2,265 firms. Roughly 5% Prowess firms are in IBBI data. Majority IBC firms are relatively smaller.
Sources: IBBI, CMIE Prowess, authors' calculations.

Table 2: Category-wise Distribution of IBC Applicants

Category	**Unique Applicants**
Bank	51
NBFC	67
Others	372
Limited Company	259
Private Limited Company	436
Total	**1,185**

Note: Banks and NBFCs are the financial creditors and all others are operational creditors.
Sources: IBBI, authors' calculations.

Table 3: Applicant Category-wise Distribution of IBC Cases (2017–2024)

	2017	2018	2019	2020	2021	2022	2023	2024	Total
Bank	22	68	101	59	70	83	96	78	577
NBFC	2	14	12	7	16	14	19	18	102
Others	9	34	77	54	59	63	55	51	402
Limited Company	13	54	52	34	23	49	42	58	325
Private Limited Company	13	41	97	48	54	61	99	68	481
Total	59	211	339	202	222	270	311	273	**1,887**

Note: This table shows the number of CIRP cases referred by different categories of creditors or applicants for each year of our sample period.
Sources: IBBI, authors' calculations.

Table 4: Year-wise Size of Firms

	Firms referred by					
FY	**Financial Creditors**			**Operational Creditors**		
	Mean	Median	N	Mean	Median	N
2013	5.73	5.90	507	4.62	4.72	828
2014	5.86	5.92	531	4.79	4.90	893
2015	5.96	5.97	515	4.83	4.95	917
2016	5.92	5.88	500	4.85	4.96	886
2017	5.85	5.88	467	4.87	4.98	827
2018	5.89	5.87	403	4.84	4.94	768
2019	5.85	5.74	349	4.82	4.87	680
2020	5.74	5.68	284	4.90	4.92	571
2021	5.68	5.55	253	4.87	4.86	505
2022	5.61	5.68	234	4.83	4.87	442
2023	5.68	5.60	201	4.87	4.93	340
2024	5.89	5.90	142	5.28	5.34	214

Note: Firm size is measured as log of Total Assets.
Sources: CMIE Prowess, authors' calculations.

Table 5: Year-wise Interest Coverage Ratio (ICR)

	Firms referred by					
FY	**Financial Creditors**			**Operational Creditors**		
	Mean	Median	N	Mean	Median	N
2013	1.60	1.86	432	1.45	1.81	633
2014	1.34	1.53	486	1.36	1.69	755
2015	1.02	1.31	482	1.32	1.55	788
2016	0.82	1.09	469	1.06	1.50	763
2017	0.60	1.03	427	1.03	1.43	706
2018	-0.21	0.81	357	0.79	1.34	662
2019	0.81	0.64	303	1.48	1.25	570
2020	0.62	0.35	235	1.42	1.06	456
2021	0.74	0.17	189	1.75	1.00	386
2022	0.76	0.49	172	1.79	1.45	329
2023	1.47	1.01	153	3.41	1.80	256
2024	0.99	2.39	113	5.25	2.46	175

Note: Interest Coverage Ratio is calculated as PBDITA/Interest Expense. Average (and median) ICR of firms referred to IBC by financial creditors has been lower than that of firms referred to by operational creditors.
Sources: CMIE Prowess, authors' calculations.

Table 6: Year-wise Leverage Ratio

	Firms referred by					
FY	**Financial Creditors**			**Operational Creditors**		
	Mean	Median	N	Mean	Median	N
2013	0.53	0.51	516	0.50	0.47	805
2014	0.56	0.53	539	0.52	0.48	874
2015	0.57	0.57	523	0.50	0.49	895
2016	0.61	0.60	511	0.54	0.50	864
2017	0.65	0.63	477	0.59	0.52	814
2018	0.72	0.67	417	0.52	0.52	761
2019	0.75	0.73	361	0.50	0.51	675
2020	0.79	0.73	294	0.53	0.50	574
2021	0.86	0.76	263	0.55	0.54	503
2022	0.86	0.73	238	0.55	0.49	442
2023	0.82	0.74	203	0.51	0.49	342
2024	0.77	0.52	144	0.47	0.48	214

Note: Leverage ratio is calculated as Total Debt/Total Assets. Average (and median) leverage of firms referred to IBC by financial creditors has been higher than that of firms referred to by operational creditors.
Sources: CMIE Prowess, authors' calculations.

Table 7: Year-wise share of Bank Borrowings

	Firms referred by					
FY	**Financial Creditors**			**Operational Creditors**		
	Mean	Median	N	Mean	Median	N
2013	0.62	0.77	471	0.52	0.73	696
2014	0.64	0.78	505	0.54	0.72	751
2015	0.65	0.77	490	0.53	0.73	764
2016	0.64	0.76	478	0.51	0.71	742
2017	0.63	0.77	446	0.46	0.69	684
2018	0.55	0.75	368	0.48	0.69	623
2019	0.55	0.71	309	0.40	0.68	534
2020	0.44	0.70	241	0.39	0.65	430
2021	0.44	0.70	209	0.34	0.64	375
2022	0.51	0.67	185	0.35	0.66	303
2023	0.49	0.57	139	0.36	0.62	216
2024	0.47	0.55	77	0.31	0.53	132

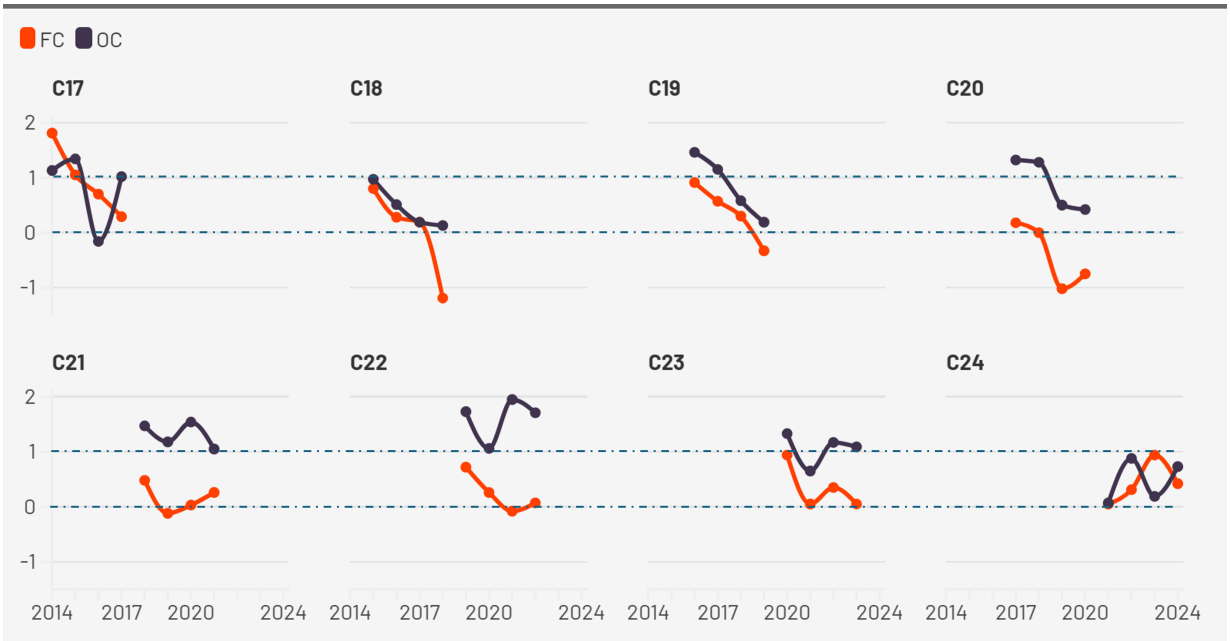
Note: Share of bank borrowings calculated as Total bank borrowing/Total debt. Average (and median) share of bank borrowings of firms referred to IBC by RBI-regulated creditors has been higher than that of firms referred to by non-RBI regulated creditors.
Sources: CMIE Prowess, authors' calculations.

Table 8: Pre-admission debt dynamics of firms by creditor categories (2017-24)

		ICR			Leverage		
t	**FC**	**Mean**	**Median**	**N**	**Mean**	**Median**	**N**
-3	0	1.27	1.29	649	0.55	0.51	765
-2	0	0.86	1.02	550	0.57	0.53	676
-1	0	0.52	0.90	433	0.65	0.58	543
0	0	1.59	0.60	283	0.53	0.59	351
-3	1	1.04	0.70	374	0.64	0.66	429
-2	1	0.98	0.26	305	0.68	0.74	376
-1	1	0.17	0.33	221	0.70	0.81	279
0	1	0.17	-0.06	151	0.76	0.90	185

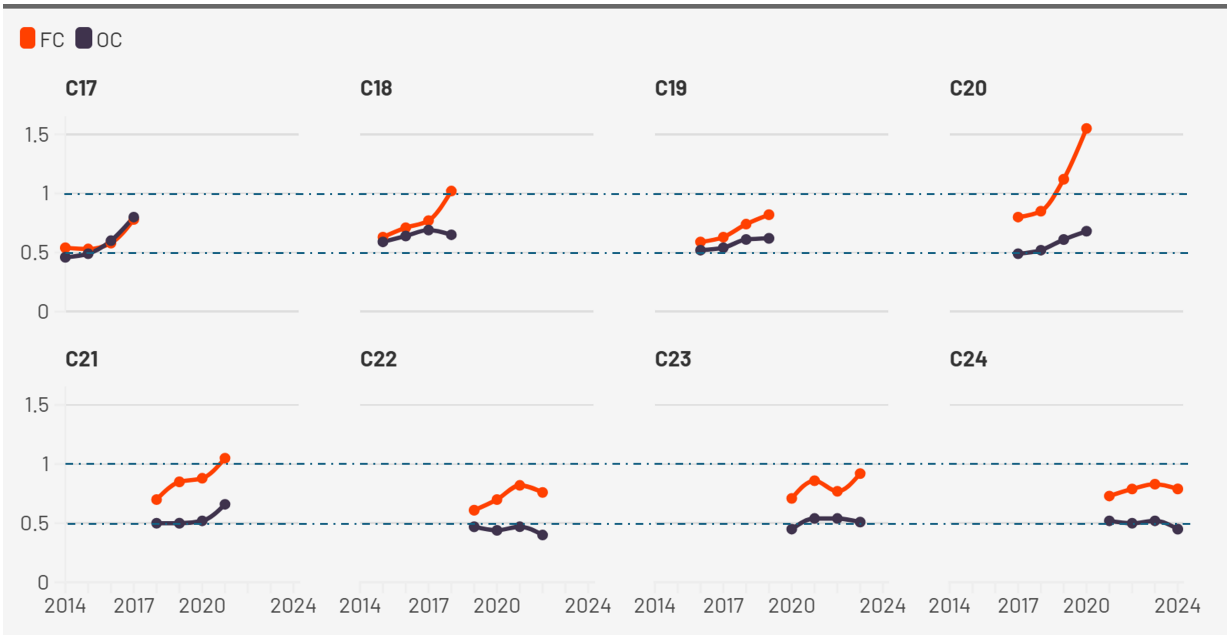
Note: FC$= 0$ denote cases referred to IBC by operational creditors and FC $= 1$ denote cases referred to IBC by financial creditors. This table shows that for firms referred to IBC by financial creditors, the median ICR is lower and the median leverage is higher, than firms referred to by other creditors, from 3 years prior to the referral year. Also, for firms referred to IBC by financial creditors, debt dynamics get worse as IBC referral year comes closer.
Sources: CMIE Prowess, authors' calculations.

Figure 1: Cohort-wise median ICR of firms by creditor categories



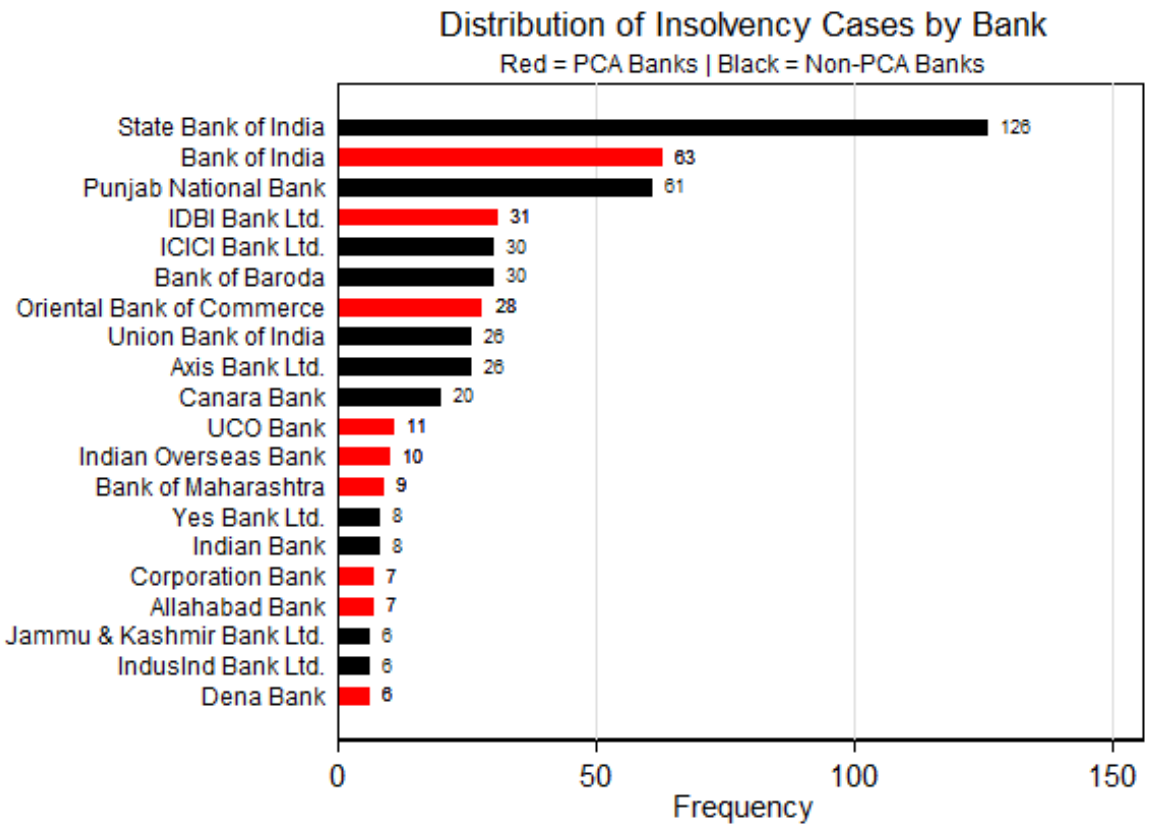
Note: This figures shows the median Interest Cover Ratio (ICR) across IBC admission year cohorts, from 2017 to 2024, for three years prior to admission (i.e. $T = -3$ to $T = 0$) for firms referred by financial creditors (FC) and operational creditors (OC).
Sources: CMIE Prowess, authors' calculations.

Figure 2: Cohort-wise median leverage of firms by creditor categories



Note: This figures shows the median leverage ratio (debt/total assets) across IBC admission year cohorts, from 2017 to 2024, for three years prior to admission (i.e. $T = -3$ to $T = 0$) for firms referred by financial creditors (FC) and operational creditors (OC).
Sources: CMIE Prowess, authors' calculations.

Figure 3: Bank-category wise distribution of cases



Note: Red bars represent PCA (Prompt Corrective Action) banks; black bars represent non-PCA banks. This figure shows the distribution of IBC cases in our sample across PCA and non-PCA banks. Only banks with more than five filings are included.
Sources: Reserve Bank of India and IBBI, authors' calculations.

Table 9: Cohort-wise debt dynamics across PCA vs Non-PCA Analysis (2017-24)

		ICR			Leverage		
t	**Category**	**Mean**	**Median**	**N**	**Mean**	**Median**	**N**
-3	All Banks	0.85	0.55	315	0.66	0.68	360
-2	All Banks	0.71	0.17	259	0.70	0.75	316
-1	All Banks	0.55	0.23	192	0.72	0.82	238
0	All Banks	0.17	-0.05	135	0.75	0.91	161
-3	PCA Banks	0.73	0.21	101	0.61	0.70	109
-2	PCA Banks	0.60	0.04	87	0.61	0.75	100
-1	PCA Banks	0.28	0.13	59	0.67	0.80	74
0	PCA Banks	-0.02	-0.12	41	0.75	1.08	51
-3	Non–PCA	0.90	0.70	214	0.68	0.67	251
-2	Non–PCA	0.75	0.27	172	0.73	0.75	216
-1	Non–PCA	0.66	0.23	133	0.74	0.83	164
0	Non–PCA	0.26	-0.05	94	0.76	0.89	110

Note: PCA refers to banks that were placed under the Prompt Corrective Action framework by the RBI. This table compares the ICR and leverage ratios for firms referred to the IBC by PCA vs. non-PCA banks.
Sources: CMIE Prowess, authors' calculations.

Table 10: Cohort-wise debt dynamics across public vs private banks (2017-24)

		ICR			Leverage		
t	**Category**	**Mean**	**Median**	**N**	**Mean**	**Median**	**N**
-3	All Banks	0.85	0.55	315	0.66	0.68	360
-2	All Banks	0.71	0.17	259	0.70	0.75	316
-1	All Banks	0.55	0.23	192	0.72	0.82	238
0	All Banks	0.17	-0.05	135	0.75	0.91	161
-3	PCA Banks	0.73	0.21	101	0.61	0.70	109
-2	PCA Banks	0.60	0.04	87	0.61	0.75	100
-1	PCA Banks	0.28	0.13	59	0.67	0.80	74
0	PCA Banks	-0.02	-0.12	41	0.75	1.08	51
-3	Non–PCA	0.90	0.70	214	0.68	0.67	251
-2	Non–PCA	0.75	0.27	172	0.73	0.75	216
-1	Non–PCA	0.66	0.23	133	0.74	0.83	164
0	Non–PCA	0.26	-0.05	94	0.76	0.89	110

Note: This table compares the ICR and leverage ratios for firms referred to the IBC by public sector vs privately owned banks.
Sources: CMIE Prowess, authors' calculations.

A.1 Data Availability Checks

Table A.1: Data availability check (CIRP firms) in Prowess

FY	Firms with Total Asset > 0	Missing
2013	1,383	504
2014	1,476	411
2015	1,485	402
2016	1,444	443
2017	1,351	536
2018	1,229	658
2019	1,082	805
2020	903	984
2021	800	1,087
2022	713	1,174
2023	569	1,318
2024	374	1,513

Note: The total number of unique CIRP firms considered here was 1,887.
Sources: CMIE Prowess, authors' calculations.

Table A.2: Data availability check (CIRP firms) in Prowess

FY	Firms with Total Asset > 0	Missing
2013	1,383	504
2014	1,476	411
2015	1,485	402
2016	1,444	443
2017	1,351	536
2018	1,229	658
2019	1,082	805
2020	903	984
2021	800	1,087
2022	713	1,174
2023	569	1,318
2024	374	1,513

Note: The total number of unique CIRP firms considered here was 1,887.
Sources: CMIE Prowess, authors' calculations.

A.2 Types of IBC Applicants

Table A.3: Unique Applicants per Year by Category (2017–2024)

Category of Applicant	2017	2018	2019	2020	2021	2022	2023	2024
Bank	10	20	26	20	23	22	24	20
NBFC	2	11	11	7	14	13	14	16
Others	9	34	73	48	56	58	52	50
Limited Company	13	50	45	28	21	48	35	49
Private Limited Company	13	41	91	48	51	60	93	65
Total	**47**	**156**	**246**	**151**	**165**	**201**	**218**	**200**

Note: Banks and NBFCs are the financial creditors and all others are operational creditors. Counts reflect unique applicants per announcement year.
Sources: IBBI, authors' calculations.

Table A.4: Year-wise Distribution of PCA and non-PCA banks

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total**
PCA Banks	1	20	47	25	24	21	21	15	174
Non–PCA Banks	21	48	54	34	46	62	75	63	403
Total	**22**	**68**	**101**	**59**	**70**	**83**	**96**	**78**	**577**

Note: This table shows the year-wise distribution of the bank-triggered IBC cases in our sample across PCA, and non-PCA categories.
Sources: Reserve Bank of India and IBBI, authors' calculations.

Table A.5: Year-wise Distribution of Private and Public-sector banks

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total**
Private	4	16	17	11	14	18	28	15	123
Public	18	52	84	48	56	65	68	63	454
Non–SBI Public	9	34	63	40	42	45	49	46	328
Total	**22**	**68**	**101**	**59**	**70**	**83**	**96**	**78**	**577**

Note: This table shows the year-wise distribution of the bank-triggered IBC cases in our sample across privately owned, publicly or government owned and non-SBI publicly owned bank categories.
Sources: Reserve Bank of India and IBBI, authors' calculations.

A.3 Bank-wise Cases by Announcement Year

Table A.6: Bank-wise cases by Announcement Year (2017–2024)

Bank Name	2017	2018	2019	2020	2021	2022	2023	2024	Total
State Bank of India	9	18	21	8	14	20	19	17	126
Bank of India	0	4	14	6	10	10	10	9	63
Punjab National Bank	2	7	5	6	9	11	11	10	61
IDBI Bank Ltd.	0	5	4	6	3	3	5	5	31
ICICI Bank Ltd.	2	6	5	3	4	4	3	3	30
Bank of Baroda	3	3	3	4	5	7	1	4	30
Oriental Bank of Commerce	0	5	16	3	3	1	0	0	28
Union Bank of India	1	4	4	3	0	4	7	3	26
Axis Bank Ltd.	0	2	3	2	5	5	4	5	26
Canara Bank	1	0	1	0	1	2	8	7	20
UCO Bank	0	1	3	3	1	2	1	0	11
Indian Overseas Bank	0	1	1	1	2	2	3	0	10
Bank of Maharashtra	1	1	1	0	1	2	2	1	9
Yes Bank Ltd.	0	0	1	0	0	2	4	1	8
Indian Bank	1	0	0	0	1	0	1	5	8
Allahabad Bank	0	3	2	1	1	0	0	0	7
Corporation Bank	0	0	4	2	1	0	0	0	7
Jammu & Kashmir Bank	0	0	1	1	1	1	1	1	6
IndusInd Bank Ltd.	0	1	0	0	0	0	5	0	6
Dena Bank	0	0	2	3	0	1	0	0	6
Subtotal (Above list)	**20**	**61**	**91**	**57**	**62**	**77**	**85**	**71**	**524**
Others	2	7	10	2	8	6	11	7	53
Grand Total	**22**	**68**	**101**	**59**	**70**	**83**	**96**	**78**	**577**

Note: Only banks with six or more total filings are listed individually. "Others" includes 31 banks with ≤ 5 filings.
Sources: IBBI and authors' calculations.

Table A.7: PCA vs non-PCA bank-wise cases by Announcement Year (2017–2024)

	2017	**2018**	**2019**	**2020**	**2021**	**2022**	**2023**	**2024**	**Total**
Non–PCA Banks									
State Bank of India	9	18	21	8	14	20	19	17	126
Punjab National Bank	2	7	5	6	9	11	11	10	61
ICICI Bank Ltd.	2	6	5	3	4	4	3	3	30
Bank of Baroda	3	3	3	4	5	7	1	4	30
Axis Bank Ltd.	0	2	3	2	5	5	4	5	26
Union Bank of India	1	4	4	3	0	4	7	3	26
Canara Bank	1	0	1	0	1	2	8	7	20
Indian Bank	1	0	0	0	1	0	1	5	8
Yes Bank Ltd.	0	0	1	0	0	2	4	1	8
Total (Non–SBI, Non–PCA)	**12**	**30**	**33**	**26**	**32**	**42**	**56**	**46**	**277**
Total (Non–PCA)	**21**	**48**	**54**	**34**	**46**	**62**	**75**	**63**	**403**
PCA Banks									
Bank of India	0	4	14	6	10	10	10	9	63
IDBI Bank Ltd.	0	5	4	6	3	3	5	5	31
Oriental Bank of Commerce	0	5	16	3	3	1	0	0	28
UCO Bank	0	1	3	3	1	2	1	0	11
Indian Overseas Bank	0	1	1	1	2	2	3	0	10
Bank of Maharashtra	1	1	1	0	1	2	2	1	9
Corporation Bank	0	0	4	2	1	0	0	0	7
Allahabad Bank	0	3	2	1	1	0	0	0	7
Dena Bank	0	0	2	3	0	1	0	0	6
United Bank of India	0	0	0	0	2	0	0	0	2
Total (PCA)	**1**	**20**	**47**	**25**	**24**	**21**	**21**	**15**	**174**
Grand Total	**22**	**68**	**101**	**59**	**70**	**83**	**96**	**78**	**577**

Note: Only banks with more than five total filings are included.
Sources: RBI, IBBI and authors' calculations.