

## Conflict Between Homebuyers and Other Creditors in the Real Estate Sector During Insolvency Proceedings: A Law and Economic Analysis

- Rajbeer Singh Saluja<sup>1</sup> & Bharadwaja Reddy Chintakunta<sup>2</sup>

<https://doi.org/10.69893/gjle.2026.000086>

### Abstract

*The Insolvency & Bankruptcy Code, 2016 (IBC) was enacted to consolidate and streamline insolvency proceedings in India, aiming for timely resolution and maximisation of asset value. However, its initial framework did not take into account, the unique position of homebuyers in real estate insolvency cases, leaving them without statutory recognition as creditors. This gap often resulted in financial and personal problems for individuals who had invested in under-construction properties. The Insolvency & Bankruptcy Code (Second Amendment) Act, 2018 addressed this by conferring the status of financial creditors upon homebuyers under Section 5(8)(f), thereby granting them representation in the Committee of Creditors and voting rights in resolution processes. While this reform was a significant step towards consumer protection, practical challenges in its implementation such as coordination among dispersed creditors, high voting thresholds, and prolonged litigation have limited its effectiveness. This paper explores the statutory framework, judicial pronouncements with a special emphasis on the Supertech judgement, and economic analysis to evaluate the current regime. It further proposes reforms to enhance efficiency, ensure equitable treatment, and align the IBC's application in the real estate sector with its core objectives.*

**Keywords:** Macroeconomics and law, Insolvency and Bankruptcy Code, Real estate, Committee of Creditors.

---

<sup>1</sup> III Year BA. LLB. Student, Gujarat National Law University, Gandhinagar (Gujarat) India, Email ID: [rajbeer24bal072@gnlu.ac.in](mailto:rajbeer24bal072@gnlu.ac.in).

<sup>2</sup> III Year BA. LLB. Student, Gujarat National Law University, Gandhinagar (Gujarat) India, Email ID: [chintakunta24bal022@gnlu.ac.in](mailto:chintakunta24bal022@gnlu.ac.in).

**Corresponding Author:** Rajbeer Singh Saluja, III Year BA. LLB. Student, Gujarat National Law University, Gandhinagar (Gujarat) India, Email ID: [rajbeer24bal072@gnlu.ac.in](mailto:rajbeer24bal072@gnlu.ac.in).

**Note:** The study adhered to accepted ethical practices and standards of research integrity throughout the research process.

## 1. Introduction

The Insolvency and Bankruptcy Code, 2016 (hereinafter *IBC*), was enacted with the objective of consolidating and amending laws relating to reorganisation and insolvency resolution in a time-bound manner, thereby maximising the value of assets and balancing the interests of all stakeholders (Insolvency and Bankruptcy Code, 2016, pmbl.). While initially designed with corporate debtors, financial institutions, and operational creditors in mind, the real estate sector presented a unique challenge. Real-estate insolvencies which involve the homebuyers, project-specific assets and strong completion-based expectations make them fundamentally different from the traditional financial-creditor-driven insolvencies.

Over the years, it has been seen that the number of real-estate CIRP admissions, prolonged delays for exceeding the statutory 330-day timeline, and very low-resolution success rates have revealed a systematic mismatch between the IBC framework and the needs of the real-estate stakeholders. These recurring outcomes raise an important policy question: *why does CIRP repeatedly fail for real-estate projects despite legislative reforms?*

This paper undertakes a law and economic analysis to answer this question. It applies key economic theories such as the Prisoner's Dilemma, Payoff Matrix, Coase Theorem, Nash Equilibrium, Kaldor-Hicks Efficiency, Transaction Cost Theory and Collective Action Theory to explain the conflicts between the homebuyers and the secured financial creditors during CIRP through different case studies. This paper demonstrates how collective-action failures, high transaction costs, and misaligned incentives push real-estate CIRPs into prolonged deadlock.

Finally, the paper suggests that the most viable solution, institutionalising a project-specific Reverse CIRP mechanism, which prioritises completion over liquidation, aligns the interests of the stakeholders and reduces the delay. The study concludes by recommending that Reverse CIRP be formally codified into the IBC to ensure predictability, efficiency, and better outcomes for homebuyers and lenders alike.

## 2. Literature Review

The following literature review examines the real estate vs homebuyers' conflict under IBC. Pandey and Anthwal challenge the fundamental classification of homebuyers as financial creditors, arguing that this fails to recognize the distinct identity of real estate allottees. They contend that placing homebuyers in the same category as commercial lenders creates an artificial paradigm where consumer expectations, cantered on specific performance and

physical asset delivery are structurally suppressed by voting mechanisms and resolution priorities built for institutional debt recovery (Pandey & Anthwal, 2024).

Chawla identifies critical institutional gaps and ongoing conflicts between the provisions of the IBC and the Real Estate (Regulation and Development) Act (RERA), the findings reveal that the IBC remains ill-equipped to handle information asymmetry and the highly divergent interests of homebuyers, while RERA simultaneously lacks the enforcement mechanism to curb the structural diversion of project funds. To resolve these systemic deadlocks, Chawla advocates for a harmonized approach that includes the integration of real estate regulatory oversight within the Committee of Creditors (CoC) and the formal adoption of specialized Reverse Corporate Insolvency Resolution Process (Reverse CIRP) models (Chawla, 2025).

Mohan & Raj argue that the legal classification of homebuyers within modern corporate insolvency frameworks is like an oxymoron because it improperly conflates consumer expectations with commercial lending objectives. Under bankruptcy rules, when homebuyers are designated as “financial creditors,” they are forced into a structure designed for institutional lenders. Lenders operate with commercial metrics focusing strictly on debt optimization, risk premiums, and maximizing financial recovery through liquidation or corporate debt restructuring. Homebuyers, by contrast, prioritize the physical completion and delivery of their residential units. By treating consumers as commercial lenders, the legal framework fails to protect their primary interest (housing delivery) and binds them to voting mechanisms that favour financial metrics over construction completion (Mohan & Raj, 2020).

Dutta illustrates the real-world economic consequences that occur when highly specific real estate assets are governed by standard corporate-wide bankruptcy procedures. Traditional corporate insolvency relies on asset-homogeneity assumptions, assuming that corporate property can be pooled, valued, and sold. However, real estate assets are illiquid and tied to specific physical allotments (individual flats). Forcing these non-fungible consumer assets into standard corporate voting and creditor-pooling rules generates massive value-destructive deadlocks. Institutional creditors frequently vote for asset liquidation or sweeping debt hair-cuts, which freezes construction activities, triggers multi-year litigation, drives down the asset value, and permanently strips homebuyers of both their life savings and their prospective homes (Dutta, 2018).

Kokorin argues by demonstrating that because modern real estate developers operate across a web of multiple, heavily interconnected projects, a traditional insolvency solution is

destined to fail. Real estate groups rely on cross-entity liability arrangements, intra-group guarantees, and the shifting of capital and asset pools across various ongoing projects. When insolvency hits a single project, standard corporate bankruptcy rules trigger an entity-wide freeze, dragging entirely solvent or nearly-finished independent real estate projects into the corporate debtor's bankruptcy pool. This halts construction across all projects indiscriminately (Kokorin, 2020).

Aggarwal, traces the evolution of the homebuyer rights under the IBC from having no legal recognition under the original IBC, 2016 to being recognised as financial creditors after the 2018 Amendment, and discusses the judicial emergence of Reverse CIRP. The author argued that there is a conflict between the homebuyers seeking the possession and banks seeking monetary recovery, while also observing that the secured or unsecured status of homebuyers remain unresolved under the IBC. He further describes Reverse CIRP as a promising and mutually beneficial solution, though he still recognises it being in an experimental phase with its effectiveness to be fully established (Aggarwal, 2024).

### **3. Reverse CIRP Framework: Judicial Precedents and Legislative Blueprint**

The Reverse Corporate Insolvency Resolution Process (Reverse CIRP) emerged as a judicial response to the inadequacies of the traditional Corporate Insolvency Resolution Process (CIRP) when applied to the real estate sector. Unlike conventional insolvency proceedings that prioritize asset monetisation and creditor recovery, Reverse CIRP focuses primarily on project completion and delivery of possession to homebuyers. The framework evolved through judicial innovation, statutory amendments, and regulatory reforms under the Insolvency and Bankruptcy Code, 2016 ("IBC"). The IBC was enacted to consolidate and amend laws relating to insolvency resolution in a time-bound manner with the objective of maximisation of asset value and balancing stakeholder interests (Insolvency and Bankruptcy Code, 2016, pmbl.). Initially, the Code did not expressly recognise homebuyers within the creditor structure, thereby excluding them from the insolvency resolution process despite their substantial financial stakes in under-construction real estate projects.

In 2018, the lack of sufficient protection and security of the homebuyers came before the Supreme Court in *Chitra Sharma v. Union of India*, where homebuyers who had invested in the projects of Jaypee Infratech Ltd. sought protection under the IBC. The Court observed that the absence of any formal recognition of homebuyers as financial creditors placed them in a vulnerable position, and stressed the need for legislative reform to protect their interests

(*Chitra Sharma v. Union of India*, 2018). This led to a change through the Insolvency and Bankruptcy Code (Second Amendment) Act, 2018, which inserted an Explanation to Section 5(8)(f), deeming amounts raised from allottees in real estate projects as amounts having the “commercial effect of a borrowing” (Insolvency and Bankruptcy Code [Second Amendment] Act, 2018, § 5(8)(f)). Consequently, homebuyers were recognised as financial creditors under the Code and granted representation in the Committee of Creditors (“CoC”). The amendment was upheld by the Supreme Court in *Pioneer Urban Land and Infrastructure Ltd. v. Union of India*, where the Court held that the classification of homebuyers as financial creditors was constitutionally valid because the advances paid by homebuyers were effectively used by developers as a source of finance and therefore possessed the commercial effect of borrowing (*Pioneer Urban Land*, 2019).

Further procedural recognition was introduced through Regulation 9A of the IBBI (Insolvency Resolution Process for Corporate Persons) Regulations, 2016, which created the mechanism of an Authorised Representative (“AR”) for homebuyers in the CoC (Insolvency and Bankruptcy Board of India [Insolvency Resolution Process for Corporate Persons] Regulations, 2016, reg. 9A). This ensured collective participation of allottees even where individual participation was impractical due to their large numbers. The broader CIRP framework continues to operate through Sections 6-10 of the IBC, permitting initiation of insolvency proceedings upon default of ₹1 crore or more, while Section 14 imposes a moratorium once proceedings commence. Sections 16-18 and 23 govern the appointment and powers of the Interim Resolution Professional (“IRP”) and Resolution Professional (“RP”), whereas Sections 21, 28 and 30(4) vest decision-making authority in the CoC, requiring 66% voting approval for resolution plans. The statutory timeline for completion of CIRP was reinforced through the Insolvency and Bankruptcy Code (Amendment) Act, 2019, which imposed the outer limit of 330 days under Section 12 (Insolvency and Bankruptcy Code (Amendment) Act, 2019).

### ***3.1. Judicial Emergence of Reverse CIRP***

The concept of Reverse CIRP was first judicially introduced by the National Company Law Appellate Tribunal (“NCLAT”) in *Flat Buyers Association Winter Hills - 77, Gurgaon v. Umang Realtech Pvt. Ltd.* In this case, the NCLAT recognised that traditional insolvency mechanisms were unsuitable for real estate projects where the primary objective of stakeholders was completion of construction rather than liquidation of the corporate debtor.

The Tribunal permitted the promoter to remain outside the formal insolvency structure while acting as an “external lender” or financial contributor under the supervision of the IRP. The NCLAT held that real estate insolvency should be project-specific and emphasised that homebuyers could not be subjected to “haircuts” in relation to allotted flats. The Tribunal further clarified that secured financial creditors could not be preferred over allottees in respect of possession rights (*Flat Buyers’ Ass’n*, 2020).

The jurisprudence was subsequently reinforced in *Anand Murti v. Soni Infratech Pvt. Ltd.*, where the Supreme Court approved a settlement structure permitting continued construction at the original contracted price in order to avoid the escalation and disruption ordinarily caused by conventional CIRP proceedings (*Anand Murti v. Soni Infratech Pvt. Ltd.*, 2022). Similarly, in *Ram Kishor Arora v. Union Bank of India and Indiabulls Asset Reconstruction Co. Ltd. v. Ram Kishore Arora*, the NCLAT and Supreme Court confined insolvency proceedings to specific defaulting projects rather than extending the moratorium to the entire real estate company. This judicial approach prevented otherwise viable projects from being paralysed by insolvency proceedings arising from isolated defaults (*Ram Kishor Arora*, 2022).

The principle of project-specific insolvency was later echoed in *Tarun Ahuja v. Puri Construction Pvt. Ltd.*, where the Tribunal recognised the importance of isolating distress to individual projects rather than imposing a company-wide freeze affecting healthy developments (*Tarun Ahuja*, 2024).

### **3.2. Interaction Between Reverse CIRP and Section 29A**

A major legal tension within Reverse CIRP arises from Section 29A of the IBC, which disqualifies defaulting promoters from submitting resolution plans. Since Reverse CIRP relies heavily upon promoter-led completion of projects (Insolvency and Bankruptcy Code, 2016, § 29A), the judiciary effectively created a functional exception by allowing promoters to infuse funds as external contributors despite the statutory bar. In practice, this judicial innovation attempted to balance the objectives of project completion and consumer protection against the anti-abuse purpose underlying Section 29A. However, because this accommodation lacked explicit statutory recognition, tribunals exercised significant discretion in determining when promoter participation could be permitted.

### ***3.3. Interaction Between IBC and RERA***

Reverse CIRP also developed within the broader regulatory overlap between the IBC and the Real Estate (Regulation and Development) Act, 2016 (“RERA”). RERA imposes strict project-account obligations, including the mandatory requirement that 70% of project funds be maintained in escrow accounts exclusively for construction and land costs (Real Estate [Regulation and Development] Act, 2016). Judicial inconsistency emerged regarding the application of these requirements during insolvency. In *Anand Murti v. Soni Infratech Pvt. Ltd.*, the Supreme Court relaxed strict adherence to RERA escrow requirements and accepted promoter undertakings to facilitate completion of construction (*Anand Murti*, 2022). Subsequently, in *Mansi Brar Fernandes v. Shubha Sharma*, the Supreme Court characterised the IBC as a “remedy of last resort” and directed homebuyers to first exhaust remedies under RERA before invoking insolvency proceedings. The Court thereby acknowledged the distinct but overlapping roles of RERA and the IBC in resolving real estate disputes (*Mansi Brar Fernandes*, 2025).

### ***3.4. Regulatory Amendments by the Insolvency and Bankruptcy Board of India***

To address procedural deficiencies in real estate insolvencies, the Insolvency and Bankruptcy Board of India (“IBBI”) amended the CIRP Regulations with effect from 3 February 2025. These amendments introduced structured safeguards particularly relevant to Reverse CIRP proceedings. Regulation 4E introduced the mechanism of Interim Possession Transfer, permitting Resolution Professionals to hand over completed units to allottees during the pendency of CIRP upon obtaining approval of 66% of the CoC. Regulation 38(4) mandated the constitution of Monitoring Committees comprising insolvency professionals, creditors, and successful resolution applicants to submit periodic progress reports concerning project completion and implementation of the resolution plan. Regulation 30C further required preparation of a Real Estate Permissions Report within sixty days, identifying all development permissions, approvals, and regulatory compliances necessary for informed creditor decision-making (IBBI Regulations, 2016). Although these amendments introduced procedural safeguards, Reverse CIRP itself continues to lack formal statutory codification within the substantive provisions of the IBC.

### ***3.5. Success of Reverse CIRP***

The insolvency of Supertech Ltd. (*Union Bank of India v. Supertech Ltd*) became one of the most significant real estate insolvency proceedings in India and demonstrated the practical

necessity of Reverse CIRP principles. The company entered insolvency following admission of a Section 7 petition filed by Union Bank of India in relation to a default of approximately ₹431.92 crore associated with the Eco Village II project. The proceedings immediately affected more than 25,000 homebuyers across multiple projects, many of whom had already paid 70–90% of the flat value. The insolvency exposed the fundamental conflict between secured creditors seeking immediate recovery and homebuyers seeking project completion and possession. The NCLAT's project-specific approach in *Ram Kishor Arora v. Union Bank of India* attempted to limit insolvency proceedings only to defaulting projects in order to avoid disruption of functioning developments (“NCLT Orders Insolvency Proceedings,” 2022; Aryan, 2022; “Flat Buyers of Supertech’s Twin Towers,” 2022; Haidar, 2025).

A further illustration of the operational success of Reverse CIRP principles is found in *Satish Chander Verma v. Grand Reality Pvt. Ltd.* The dispute arose from the stalled “Marvel Ganga Fria” residential project in Pune, where allottees had paid over ₹22.58 crore but possession had not been delivered (*Satish Chander Verma v. Grand Reality Pvt. Ltd.*, 2025b). Following commencement of CIRP, Pax Homes LLP intervened and expressed willingness to complete the project. During the pendency of these proceedings, the appellant, along with the developer and homebuyers, approached the Supreme Court seeking expedited resolution, and on 30 May 2025 the Supreme Court directed the NCLAT to dispose of the matter at the earliest (*Satish Chander Verma v. Grand Reality Pvt. Ltd.*, 2025a). Instead of permitting conventional CIRP to proceed toward liquidation or third-party resolution, the NCLAT permitted a project-specific completion mechanism under judicial supervision. Construction was ultimately completed, occupation certificates were obtained, and possession was delivered to all homebuyers. Consequently, the NCLAT closed the CIRP proceedings and discharged the Resolution Professional (Bansal, 2025). The case reaffirmed the principle originally articulated in *Flat Buyers Association Winter Hills - 77, Gurgaon v. Umang Realtech Pvt. Ltd.* that real estate insolvency may be resolved through promoter-led, project-specific completion mechanisms rather than value-destructive liquidation (*Flat Buyers’ Ass’n*, 2020).

Overall, the legal development of Reverse CIRP demonstrates a gradual transition from conventional creditor-centric insolvency toward a project-completion-oriented framework tailored to the peculiar realities of the real estate sector. The framework presently rests upon a combination of statutory amendments recognising homebuyers as financial creditors,

regulatory interventions by the IBBI, and extensive judicial innovation through NCLT, NCLAT, and Supreme Court jurisprudence.

#### **4. Conceptual Framework and its Application**

##### **4.1. Game Theory**

The Prisoner's Dilemma is a game theory concept involving two individuals arrested for a crime and kept in separate cells. Each person can either cooperate by staying silent or defect by confessing and blaming the other. If both remain silent, they receive a light punishment (for example, one year in prison each). If one confesses while the other stays silent, the confessor goes free and the other receives a severe punishment (for example, ten years). If both confess, they each receive a moderate punishment (for example, five years). Although staying silent benefits both individuals the most, fear of being betrayed usually leads both to confess, resulting in a worse outcome for both (Meegan, 2023; Investopedia Team, 2025).

The Supertech insolvency case reflects this situation. Banks could either cooperate by delaying loan repayment and allowing the developer to use available funds to complete construction, or defect by demanding immediate repayment and pushing for liquidation. Liquidation is considered the least efficient because in liquidation the recovery rate is only 7% (Singh & Thakkar, 2021). Similarly, homebuyers could cooperate by supporting a restructuring plan and accepting delays in possession, or defect by demanding immediate possession or refunds because they had already paid significant amounts. The best outcome for everyone required cooperation from both sides so that projects could be completed and asset value preserved. However, a lack of trust prevented this. Banks opposed proposals that prioritized homebuyers, while homebuyers focused on obtaining possession as quickly as possible. Both feared that cooperating alone would leave them worse off if the other side did not cooperate. As a result, both chose to protect their own interests, creating a deadlock that ultimately harmed everyone involved (Haidar, 2025).

The payoff matrix is a tool which is used in the game theory to represent the different strategic choices and possible outcomes between two or more decision-makers, called players (Lee, 2025).

|                    | Player B: Option 1 | Player B: Option 2 |
|--------------------|--------------------|--------------------|
| Player A: Option 1 | A: x, B: y         | A: m, B: n         |
| Player A: Option 2 | A: p, B: q         | A: r, B: s         |

|  |  |  |
|--|--|--|
|  |  |  |
|--|--|--|

*Table 1: Basic structure of a Payoff Matrix*

*Source: Author's own creation*

A payoff matrix is a game theory tool used to show the different choices available to players and the possible outcomes resulting from those choices (Lee, 2025). By examining the matrix, we can understand how the decisions of one party affect the other and whether cooperation can lead to better results or whether mistrust prevents it (Király et al., 2024).

|                                                                     |                                                                    |                                                                                                    |
|---------------------------------------------------------------------|--------------------------------------------------------------------|----------------------------------------------------------------------------------------------------|
|                                                                     | Homebuyers:<br>Cooperate where they support plan and accept delay. | Homebuyers:<br>Oppose the demand of refund and only want the possession of their flat immediately. |
| Banks: Cooperate where they defer repayment and allow construction. | Banks: 3, Buyers: 3<br>Projects completed both benefits.           | Banks: 0, Buyers: 5<br>Banks lose; buyers win via court, allowing possession                       |
| Banks: Oppose where they demand repayment and push liquidation.     | Banks: 5, Buyers: 0<br>Banks recover loans, buyers lose homes      | Banks: 1, Buyers: 1<br>Deadlock, where both suffer                                                 |

*Table 2: Payoff Matrix*

*Source: Author's own creation*

In the Supertech insolvency case, two main stakeholders were involved: homebuyers, who wanted their homes completed and delivered, and banks and financial institutions, who wanted repayment of their loans even if it required liquidation of the company (Dev, 2022). Both groups had choices that directly affected each other.

The **(3,3)** outcome in the table represents mutual cooperation. Banks agree to delay repayment and allow construction to continue, while homebuyers support the plan and accept delays. This results in project completion, delivery of homes, and eventual loan recovery. The **(0,5)** outcome occurs when banks cooperate but homebuyers oppose the plan. Legal disputes delay the process, causing losses to banks, while buyers may recover money through court intervention. The **(5,0)** outcome occurs when banks oppose the plan but homebuyers cooperate. Homebuyers continue to support the process, but banks push for liquidation,

causing projects to stop and buyers to lose both their homes and investments. The **(1,1)** outcome represents mutual opposition. Both sides refuse to compromise, leading to delays, stalled construction, legal expenses, and poor recovery for all stakeholders.

This matrix shows that the lack of cooperation between banks and homebuyers in the Supertech CIRP resulted in highly inefficient outcomes. Instead of working together to maximize overall value and complete projects, both sides acted in their own interests, leading to prolonged litigation and unfinished projects.

Nash Equilibrium refers to a situation where no player can improve their outcome by changing their strategy alone while the other players continue with their existing strategies. In such a situation, each player's decision is the best response to the decisions of the others (Myerson, 1999).

In the Supertech case, homebuyers wanted construction to continue and homes to be delivered, while banks wanted loan recovery and, in some cases, liquidation of the company. Although both groups were members of the Committee of Creditors (CoC), their interests were fundamentally different (Dev, 2022).

The case ultimately reached at **(1,1) Nash Equilibrium**. Banks continued to insist on loan recovery, while homebuyers pursued possession through claims and court proceedings. Neither side was willing to change its position because doing so alone could make it worse off. Although the cooperative **(3,3)** outcome would have benefited everyone more, distrust and short-term concerns prevented cooperation. This created a deadlock where neither side could improve its position independently, making it a classic example of Nash Equilibrium (Chen, 2025).

#### ***4.2. Kaldor-Hicks Efficiency***

Kaldor-Hicks efficiency states that a decision is efficient if the people who benefit from it gain enough that they could theoretically compensate those who suffer losses, even if compensation is not actually paid. The focus is on whether the overall benefits are greater than the overall losses, rather than ensuring that every individual benefits. This principle is especially useful in insolvency cases, contract renegotiations, and market regulation, where it is often impossible to make everyone better off. Instead, the goal is to maximize overall welfare.

In insolvency proceedings under the IBC, where different stakeholders have conflicting interests, the Kaldor-Hicks approach asks a simple question: **Do the total benefits of a**

**decision exceed the total losses?** If the answer is yes, the outcome is considered efficient, even if some stakeholders suffer losses ("Kaldor-Hicks Efficiency," 2025).

For example, if a resolution plan generates a gain of ₹500 crore for banks but causes a loss of ₹100 crore to homebuyers due to delays or partial possession, the net gain is ₹400 crore. Therefore, the plan would be considered Kaldor-Hicks efficient because the banks' gain could hypothetically compensate the homebuyers' loss, even if no compensation is actually paid.

In the Supertech case, a resolution plan where banks accept a haircut or delay in repayment while homebuyers accept delayed possession or partial units may not fully satisfy either group. However, if the project is completed and the company survives, the overall gains to all stakeholders exceed the losses caused by delays, rental expenses, and opportunity costs. Therefore, such a plan can be considered Kaldor-Hicks efficient. This framework supports decisions that may impose losses on some stakeholders if doing so creates greater overall benefits, making it particularly relevant in complex insolvency cases like Supertech.

#### **4.3. Transaction cost economics**

Application of the transaction cost economics by Oliver Williamson is important to understand the various instances in the process which contribute to the high transaction cost of CIRP in the case of real estate sector:

##### **4.3.1. Bounded Rationality: The Information Asymmetry**

Williamson begins with this: people are bounded rational; they can only process a limited amount of information and make decisions within constrained cognitive limits (Simon, 1955).

Individual homebuyers cannot easily obtain or comprehend the financial details they need to make informed decisions. A homebuyer does not have access to Supertech's complete accounts, does not know how much the company actually owes to Union Bank of India or other creditors, and cannot readily assess whether completing projects is financially viable or whether liquidation would better protect their interests. This information gap is structural as even if a homebuyer invests time in self-education, it is quite difficult to match the sophisticated knowledge that institutional creditors maintain through teams of professionals.

#### 4.3.2. *Opportunism:*

Williamson defines opportunism as “self-interest seeking with guile” behaviour where parties exploit information gaps and ambiguities for strategic advantage (Williamson, 1975, pp. 20–23).

Developer opportunism occurred through systematic fund diversion. Supertech accepted homebuyer advances exceeding 70% of flat costs but then allegedly shifted these funds across multiple projects rather than maintaining dedicated project accounts required by RERA. This violated the 70% requirement designed to protect homebuyers. This is opportunistic behaviour enabled by information asymmetry as homebuyers could not track where their funds were actually utilized because they lacked financial visibility into the company’s operations.

Creditor opportunism emerges during CIRP through voting strategies that prioritize individual creditor recovery over total value preservation. Banks facing the payoff matrix, observe that their highest individual payoff comes from opposing cooperative plans and instead demanding rapid liquidation or asset sales to recover dues. This voting choice is rational from the bank’s individual perspective but against the collective outcome, even if liquidated, it destroys 75-80% of project value, all stakeholders would suffer. Yet each bank still prefers its maximum individual recovery over collectively lower but broader benefit.

Williamson states that when opportunism is possible, parties must invest in costly safeguards monitoring mechanisms, legal structures, and enforcement systems to protect themselves (Williamson, 1975, pp. 20–23). In Supertech CIRP, the Resolution Professional must conduct audits to trace fund diversions, verify creditor claims, and mediate between competing interest groups. All these activities consume time and money, increasing transaction costs and obstructing prompt resolution. The very need for court supervised insolvency proceedings, rather than simple private renegotiation between developers and creditors, reflects the difficulty in controlling opportunism through market forces alone.

#### 4.3.3. *Asset Specificity: Why Partially Built Apartments Cannot Be Easily Appropriated*

Asset specificity measures how much an asset loses value when redeployed outside its original transaction area (Williamson, 1991). Real estate exhibits extreme asset specificity; for instance, Supertech’s projects occupy fixed land parcels in Greater Noida that cannot be altered, repurposed without massive expense, or sold near full value if abandoned mid-construction. A half-completed residential tower has exactly one economic purpose: project

completion. Because the structural frames, materials, and installations cannot be reused elsewhere without substantial loss, the invested capital becomes permanently “locked in”. This extreme asset specificity triggers a severe hold-up problem. Once homebuyers advance 70% to 90% of flat costs into a partially built structure, they are effectively trapped. They cannot recover their money without project completion, leaving them vulnerable to developers or Resolution Professionals who can exploit this dependency by demanding extra payments or imposing unfavourable terms. Conversely, abandoning the project and liquidating the half-built structure destroys value for all stakeholders, as incomplete buildings sell for only a small fraction of their completion value. Traditional corporate insolvency assumes assets can be liquidated or transferred cleanly without massive value destruction. However, this framework collapses entirely in the real estate sector because the underlying assets are highly specific

#### *4.3.4. Governance Failure: Why CIRP Cannot Solve Real Estate Insolvency*

Williamson’s central insight is that different transaction problems require different governance structures. When transaction costs are low and assets are general-purpose (fungible), market contracting works well. When transaction costs rise and assets become specific, hierarchical governance (firms, organizations, courts) becomes necessary (Williamson, 1999).

The current CIRP framework was designed mainly for insolvencies in manufacturing and financial services sectors where assets are relatively general-purpose, creditor interests align around debt recovery, and resolution timelines can be compressed to 330 days. It assumes a uniform creditor class with similar objectives: maximize asset value, recover debts, liquidate or rehabilitate quickly.

Real estate insolvency exhibits fundamental governance misalignment as explained below: CIRP’s 330-day deadline assumes rapid asset identification and valuation. Real estate construction operates on multi-year timescales (as the constructions are time taking). Completing Supertech projects requires 2-3 additional years of construction, the statutory timeline creates a pressure toward liquidation rather than completion (which is value maximising). The Supertech CoC comprises incompatible stakeholders with incompatible preferences: homebuyers seek possession and project completion; banks seek debt recovery and almost every time prefer immediate asset monetization; construction contractors seek payment of dues; employees want salaries. Standard CIRP governance: Committee voting

and majority rule cannot reconcile conflicting objectives among numerous stakeholders. Williamson emphasizes that governance structures must simultaneously safeguard transactions against opportunism hazards. A single Resolution Professional cannot effectively monitor opportunism across 40 Supertech projects, each with distinct construction status, stakeholder claims, and completion timelines.

Williamson's theory suggests that when standard governance fails, hierarchical governance characterized by court oversight, mandatory disclosure, and judicially enforced coordination should be encouraged (Williamson, 1999). Reverse CIRP shifts to bilateral negotiation between the promoter and secured lenders, with homebuyer protections enforced through judiciary. By eliminating the need for large group coordination while providing judicial oversight, Reverse CIRP reduces transaction costs and solves the governance problem that standard CIRP cannot.

#### ***4.4. Collective Action Problem: Why Homebuyers Fail Despite Numerical Superiority***

Mancur Olson's Logic of Collective Action provides the explanation for an apparent paradox in Supertech CIRP: homebuyers can potentially hold the higher share in the Committee of Creditors voting share yet exercise minimal effective influence over resolution outcomes, Olson's central finding that rational, self-interested individuals in large groups will not voluntarily act to achieve common objectives without special incentive mechanisms, directly explains this irrational outcome (Olson, 1965).

The asymmetry between homebuyers (large, dispersed group) and banks (small, concentrated group) creates disparities in bargaining power that structure resolution outcomes in favour of creditors despite homebuyer numerical dominance. Understanding this is essential for explaining why the 2018 IBC amendment conferring homebuyer financial creditor status has failed to deliver anticipated improvements in homebuyer protection (Insolvency and Bankruptcy Code [Second Amendment] Act, 2018). Olson identifies a fundamental distinction: small concentrated groups can overcome barriers; large dispersed groups cannot. Homebuyers exemplify a large diffuse group facing coordination obstacles (Olson, 1965).

The free-rider problem operates at scale. Each individual homebuyer faces identical economic incentives: the costs of collective action must be borne by individuals, while any benefits are distributed across all the members. Rational self-interest leads each homebuyer to assume others will bear the costs while they can effortlessly "free-ride" on the collective

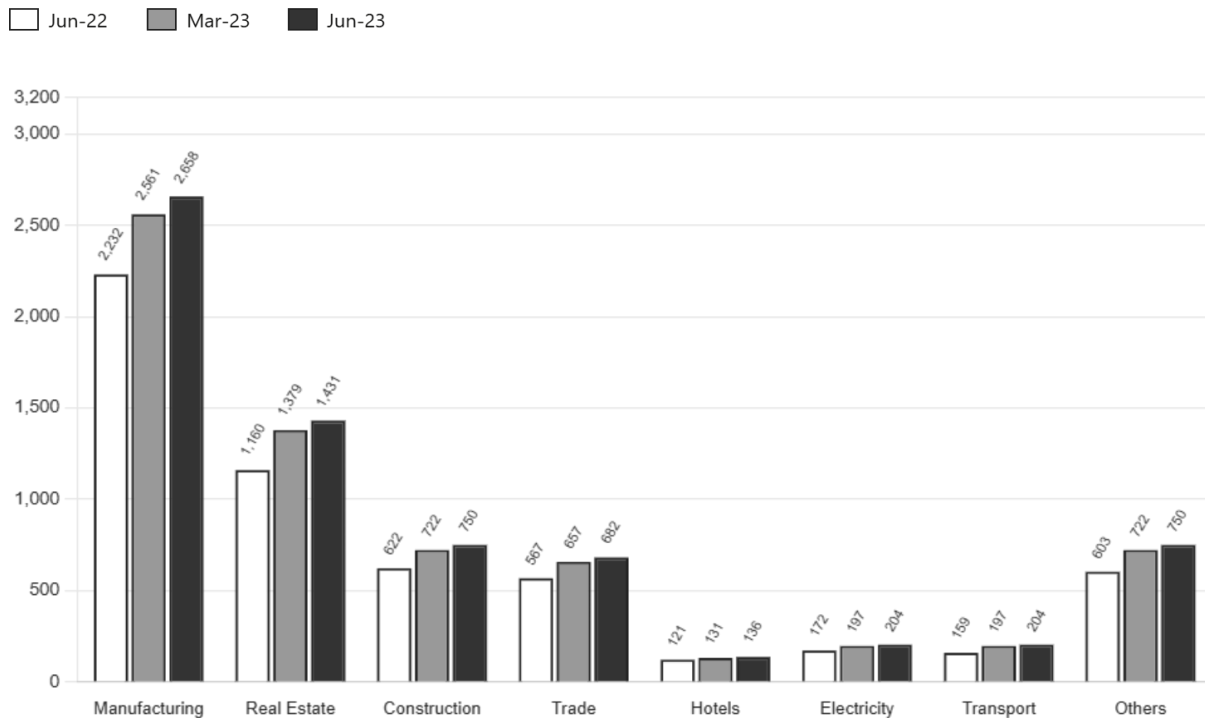
outcome. However, when all of them reason identically, insufficient resources are devoted to collective action, and the group cannot achieve its objectives despite numerical majority. Geographic dispersion amplifies coordination costs. Homebuyers are scattered across Delhi NCR and multiple states, making face to face coordination expensive. Banks operate through centralized offices where representatives can coordinate comparatively with great ease. This disparity in coordination speed means bargaining asymmetry: banks formulate careful unified positions whereas homebuyers would require weeks of organizing to achieve minimal consensus.

The Authorized Representative (AR) mechanism fails to solve underlying collective action. While the AR aggregates diverse preferences into a single vote, it creates new principal-agent problems. An AR appointed by a majority subset of homebuyers may not faithfully represent all homebuyer interests; a 51% majority can bind a 49% minority. The AR mechanism treats a problem (aggregation difficulty) but not the bigger problem (Jensen & Meckling, 1976).

Olson identified only two mechanisms through which large groups overcome collective action problems: selective incentives (private rewards for participation) and coercion (mandatorily enforced by law) (Olson, 1982). Neither operates effectively in current CIRP. Those homebuyers investing time and money in organizing collective action receive identical outcomes to free-riders. There is no mechanism to reward active participation like, priority possession for those contributing to legal funds. Such discrimination within the homebuyer class is not permitted under IBC provisions and also is not suitable in these cases as this may lead to elitism among the homebuyers. No law mandates that homebuyers contribute to collective legal funds or permits forced contribution pooling. The Authorized Representative can compel homebuyers to fund sophisticated litigation strategies. This can be a viable way to combat free riding and truly enable collective action. Institutional structure facilitates collective action. Banks operate through formal organizational hierarchies with clear and dedicated strategies. Real estate insolvency illustrates the same: banks holding a smaller voting share frequently exercise decisive influence over resolution outcomes, while homebuyers holding a higher voting share remain marginalized and unable to get favourable settlement terms.

## **5. IBC Performance in Real Estate Sector**

The performance of IBC in the real estate sector reveals deep structural inefficiencies that consistently hinder effective resolution. According to the IBBI's aggregated CIRP data, more than 7,000 corporate debtors have admitted into insolvency since 2016, of which the real-estate sector accounts for approximately 21%-24%, which makes it the second-largest contributor to CIRP admissions after manufacturing (CARE Ratings, 2023).



*Chart 1: The cumulative of CIRP cases (2023) (sector wise)*

*Source: IBBI (Care Ratings, 2023)*

Despite this high representation, the results remain disproportionately poor. Only about 14–15% of real-estate CIRPs end with an approved resolution plan, while a large share of the remaining cases either moves into liquidation or are closed due to withdrawal, appeal, or settlement. However, there is a big category which shows that the cases still remain pending

for several years (CARE Ratings, 2023).

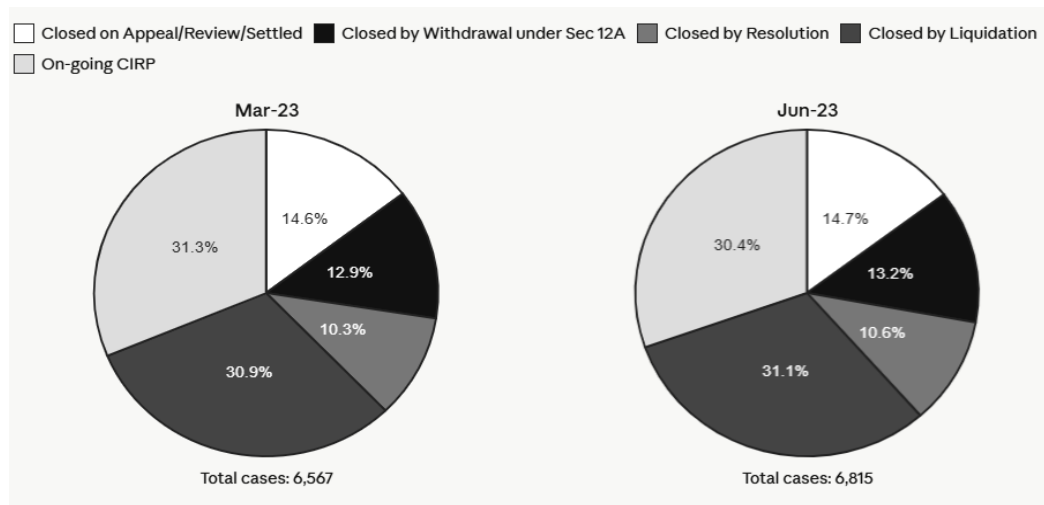


Chart 2: The status of CIRPs.

Source: IBBI (Care Ratings, 2023)

The problem is exacerbated by prolonged timelines across real-estate CIRPs. IBBI data shows that more than 65% of ongoing CIRPs have already crossed 270 days, and a significant portion is pending for over two years. This delay is far beyond the statutory 330-day limit, showing the systemic inefficiency of the CIRP framework in the real-estate sector. (CARE Ratings, 2023)

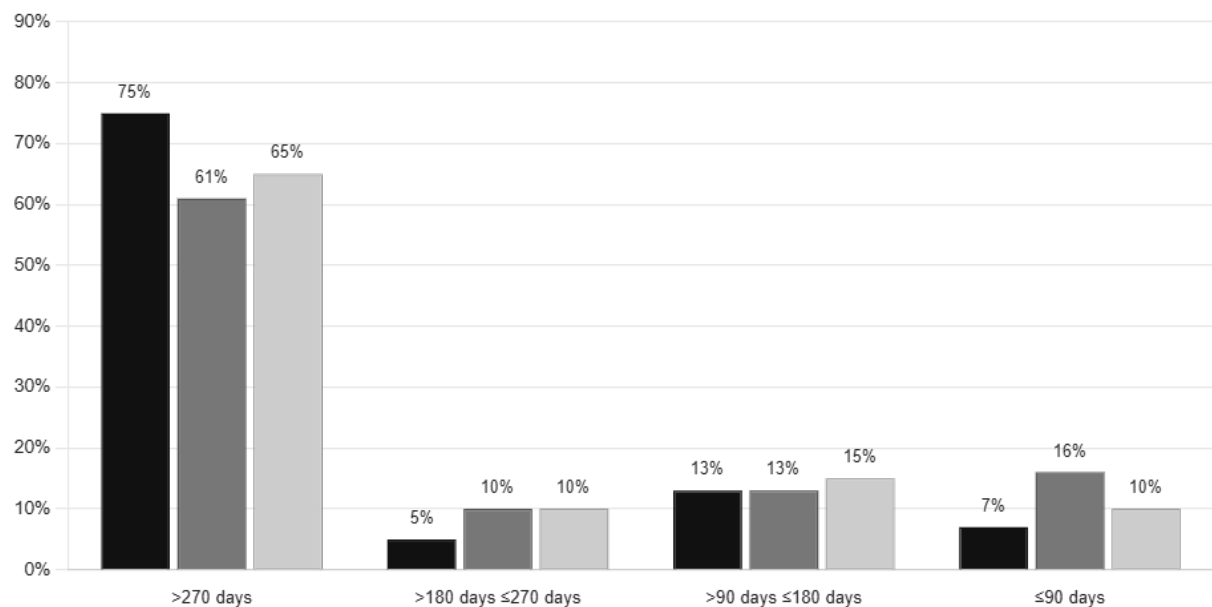


Chart 3: The timeline of Ongoing CIRPs

Source: IBBI (Care Ratings, 2023)

These trends collectively shows that the IBC, in its current form, struggles to deliver timely or meaningful resolutions in real-estate insolvencies. Stakeholder's conflicts, project-specific constraints and prolonged timelines combine to render CIRP substantially ineffective for homebuyer-driven distress cases and it necessitates alternative mechanisms such as codification of Reverse CIRP and project- level resolution frameworks.

## 6. Suggestions and Findings

The core finding of the paper is that a deep structural mismatch exists between the traditional framework of the Insolvency and Bankruptcy Code, 2016 (IBC) and the economic realities of the real estate sector. While the IBC was originally framed as a creditor-driven, time-bound mechanism designed to maximize asset value, real estate insolvencies are uniquely project-specific, involve highly immovable assets, and include homebuyers whose primary interests are centred on housing security and possession rather than financial restructuring or liquidation. Aggregated data from the Insolvency and Bankruptcy Board of India (IBBI) reflects these structural inefficiencies: the real estate sector is the second-largest contributor to Corporate Insolvency Resolution Process (CIRP) admissions (accounting for 21% to 24%), yet its outcomes are disproportionately poor. Only about 14% to 15% of real estate CIRPs yield an approved resolution plan, while over 65% of ongoing cases are delayed beyond 270 days, frequently breaching the statutory 330-day limit (CARE Ratings, 2023). Through a law and economic analysis, the authors demonstrate that judicial and statutory attempts to solve this crisis have fallen short due to systemic, behaviour-driven deadlocks. Although the 2018 amendment legally classified homebuyers as financial creditors to grant them representation in the Committee of Creditors (CoC), economic principles explain why this failed to deliver effective protection. Applying Mancur Olson's *Logic of Collective Action*, the paper finds that homebuyers operate as a large, geographically dispersed group plagued by the free-rider problem and high coordination costs. This severely limits their actual influence in voting blocs compared to secured lenders (like banks), who operate as small, concentrated groups with clear institutional hierarchies. Furthermore, concepts from game theory, such as the *Prisoner's Dilemma* and *Nash Equilibrium*, highlight a fundamental conflict of interest. Homebuyers seek project completion and apartment possession, while banks rationally pursue immediate loan recovery or asset monetization. This strategic mistrust drives both parties into a defensive, non-cooperative Nash Equilibrium that stalls construction, causes prolonged litigation, and destroys overall value. From a transaction cost

perspective, real estate assets possess extreme asset specificity (partially completed towers have only one economic purpose), which leads to a hold-up problem where assets cannot be easily repurposed, making standard corporate liquidation highly value-destructive. Finally, while judge-made mechanisms like Reverse CIRP, (focusing on project completion led by a promoter under professional supervision) align better with Kaldor-Hicks efficiency, their reliance on judicial discretion rather than statutory text breeds enforcement inconsistencies regarding fund segregation, Section 29A disqualifications, and compliance with the Real Estate Regulatory Authority (RERA).

To resolve these systemic defects, the authors conclude that real estate insolvency reform must move away from unpredictable, case-by-case judicial workarounds and instead be formally integrated into the text of the IBC through comprehensive legislative action. First, the authors suggest the formal codification of project-specific Reverse CIRP and project-wise insolvency within the IBC. This statutory architecture would allow tribunals to isolate insolvency proceedings strictly to a defaulted project site rather than imposing a company-wide moratorium. By confining the distress, the law can prevent a spillover effect that halts a developer's otherwise healthy, well-performing projects, thereby protecting non-defaulting homebuyers and preserving ongoing corporate operations. Second, the paper recommends introducing diligently tailored, structured exceptions to Section 29A of the IBC specifically for the real estate sector. Under strict monitoring, capable original promoters who are entirely clear of fraud, malfeasance, or asset diversion should be permitted to submit project-specific resolution plans to complete stalled constructions. To ensure maximum transparency, accountability, and market value preservation under this exception, the authors advise that these promoter-led plans be subjected to an open "Swiss Challenge" process, require an elevated 75% CoC approval threshold, and grant homebuyers a distinct voting block to safeguard their possession-seeking assets. Third, to combat the information asymmetries and opportunism inherent in real estate insolvencies, the authors recommend upgrading the regulatory monitoring framework. They advocate for the implementation of mandatory monitoring committees, independent asset valuations, and a shift from quarterly progress tracking to strict monthly reporting during the construction phase. Finally, the authors emphasize the critical need to harmonize the friction between RERA's regulatory mandates and the IBC's insolvency rules. Because local RERA authorities often lack enforcement capabilities once a developer becomes truly insolvent, the authors propose a new statutory Coordination Framework. This framework would establish a clear operational hierarchy,

utilizing fast-track approvals that respect RERA for technical and regulatory compliance (such as fund segregation and escrow rules) while utilizing the IBC framework for corporate financial restructuring, ultimately aligning insolvency law with real estate's economic realities to lower transaction costs and ensure predictable outcomes.

## 7. Conclusion

This paper addresses the regulatory and economic mismatch within the Insolvency and Bankruptcy Code, 2016 (IBC) regarding the unmapped statutory position of homebuyers in real estate insolvencies. While the original 2016 framework completely ignored real estate allottees, the subsequent Insolvency and Bankruptcy Code (Second Amendment) Act, 2018 attempted to balance consumer protection by designating homebuyers as financial creditors under Section 5(8)(f), granting them representation in the Committee of Creditors (CoC) via an Authorized Representative (AR) under Regulation 9A. However, as outlined in the introduction, the unique, project-specific, and completion-based expectations of real estate stakeholders remain fundamentally incompatible with a rigid, traditional corporate insolvency process. This structural misalignment frequently breaches the statutory 330-day timeline under Section 12, forcing viable developments into value-destructive deadlocks rather than maximizing asset value. The existing academic literature underscores this systemic friction, with scholars noting that conflating consumer housing expectations with commercial lending metrics suppress consumer rights, ignore the multi-project interconnected liability networks of modern developers, and trigger sweeping corporate freezes that strip homebuyers of both their life savings and their prospective homes.

The judicial emergence and evolution of the Reverse Corporate Insolvency Resolution Process (Reverse CIRP) developed as a necessary, judge-made workaround to these corporate-wide constraints. Pioneered by the National Company Law Appellate Tribunal (NCLAT) in *Flat Buyers Association Winter Hills - 77, Gurgaon v. Umang Realtech Pvt. Ltd.*, and reinforced by the Supreme Court in *Anand Murti v. Soni Infratech Pvt. Ltd.*, the judiciary successfully established that real estate insolvency should be project-specific. By confining the insolvency and moratorium to individual defaulting project sites, as seen in *Ram Kishor Arora, Indiabulls*, and *Tarun Ahuja*, the courts prevented isolated defaults from paralyzing a developer's healthy, parallel developments. Yet, this judicial mechanism operates under severe legal tension. It creates a functional, uncoded exception to the anti-abuse provisions of Section 29A by allowing defaulting promoters to infuse funds as external

contributors. Furthermore, it creates friction with the Real Estate (Regulation and Development) Act, 2016 (RERA), which mandates that 70% of project funds be maintained in strict escrow accounts. While the Insolvency and Bankruptcy Board of India (IBBI) attempted to bridge these procedural gaps through the February 2025 amendments: introducing Regulation 4E for Interim Possession Transfers, Regulation 38(4) for Monitoring Committees, and Regulation 30C for Real Estate Permissions Reports, Reverse CIRP still lacks formal statutory codification within the text of the IBC.

The critical operational necessity of these project-completion principles is starkly highlighted by the major real estate insolvencies examined in this study. In the *Supertech Ltd.* insolvency, a Section 7 petition over a ₹431.92 crore default on the Eco Village II project immediately jeopardized over 25,000 homebuyers, exposing the hostile impasse between secured lenders demanding debt recovery and buyers seeking possession. Conversely, the operational success of a project-specific approach was validated in *Satish Chander Verma v. Grand Reality Pvt. Ltd.* concerning the stalled Marvel Ganga Fria project (2025b). Instead of succumbing to third-party liquidation, judicial supervision allowed an external entity (Pax Homes LLP) to step in, complete construction, obtain occupation certificates, and deliver physical possession to all homebuyers, resulting in the successful closure of CIRP proceedings by the NCLAT.

Applying a rigorous law and economic analysis reveals the precise behavioural and structural barriers that cause traditional CIRPs to fail. Through Game Theory, the *Supertech* deadlock is modelled as a classic Prisoner's Dilemma. While mutual cooperation would yield the highest collective payoff, a mutual deficit of trust drives banks (demanding rapid asset monetization) and homebuyers (demanding immediate possession) into a highly inefficient (1,1) Nash Equilibrium, where both sides suffer from prolonged, expensive litigation and unfinished projects. While a cooperative restructuring plan aligns with Kaldor-Hicks Efficiency, where the aggregate welfare of completing the project outweighs localized delays or financial haircuts, strategic mistrust blocks its implementation. This deadlock is further explained by Oliver Williamson's Transaction Cost Economics. Real estate assets exhibit extreme asset specificity; a half-completed residential tower cannot be redeployed, trapping homebuyers in a severe "hold-up problem" where they are vulnerable to cost escalations. Bounded rationality and severe information asymmetry prevent individual buyers from verifying accounts, while developer opportunism (such as the illicit diversion of homebuyer advances across multiple projects) and creditor opportunism drive up monitoring and

enforcement costs. Ultimately, standard CIRP governance fails because its multi-year construction demands cannot be reconciled with a compressed 330-day corporate timeline. This governance failure is compounded by Mancur Olson's *Logic of Collective Action*, which demonstrates why homebuyers remain marginalized despite their numerical superiority in the CoC. As a large, geographically dispersed group, homebuyers are plagued by high coordination costs and the free-rider problem, lacking the selective incentives or statutory coercion required to pool litigation funds. Consequently, small, concentrated, and institutionally organized financial creditors consistently dominate the bargaining landscape. The empirical performance data compiled by the IBBI validates these theoretical breakdowns, showing that while real estate represents the second-largest contributor to CIRP admissions (accounting for 21% to 24%), its outcomes are disproportionately dismal. Only 14% to 15% of real estate CIRPs successfully conclude with an approved resolution plan, while over 65% of ongoing cases languish beyond 270 days and frequently cross multiple years.

To bridge this gap, the core findings and suggestions of this paper call for a paradigm shift away from unpredictable judicial workarounds and toward permanent legislative reform. First, the paper recommends the formal statutory codification of project-specific Reverse CIRP within the text of the IBC to confine defaults and protect non-defaulting phases from company-wide liquidations. Second, it suggests introducing highly structured, monitored exceptions to Section 29A, permitting original promoters who are entirely clear of fraud or malfeasance to submit resolution plans. To maintain market integrity, these plans must be subjected to an open Swiss Challenge process, require an elevated 75% CoC approval threshold, and utilize a distinct homebuyer voting bloc. Third, to curb opportunism and close information asymmetries, the paper advises upgrading the monitoring architecture to include independent asset valuations and strict monthly technical and construction reporting. Finally, the authors propose a statutory Coordination Framework to harmonize the friction between RERA and the IBC, leveraging fast-track approvals that respect RERA's technical and escrow safeguards while deploying the IBC's financial restructuring powers. Incorporating these structural reforms is the only viable mechanism to eliminate value-destructive deadlocks, lower transaction costs, and fulfil the core statutory objectives of balancing stakeholder interests and maximizing asset value within the real estate sector.

## References

- Aggarwal, A. (2024). Provisions of IBC in India with focus on real estate sector: Reverse CIRP. *International Journal of Advanced Legal Research*, 4(3), 1332–1341.
- Anand Murti v. Soni Infratech Pvt. Ltd., Civil Appeal No. 7534 of 2021 (Supreme Court of India, April 27, 2022).
- Aryan, A. (2022, March 26). Debt-hit Supertech enters insolvency; builder says won't impact operations of group. *The Indian Express*.
- Bansal, A. (2025, July 18). *Reverse CIRP and its judicial endorsement: Analysing the first-ever closure by NCLAT in Grand Reality*. IBCLAW.
- CARE Ratings. (2023, September 13). *Insolvency and Bankruptcy Code update: June 2023*.
- Chawla, N. K. (2025). *Gap identification and conflict resolution between IBC and RERA*. Indian Institute of Insolvency Professionals of ICAI.
- Chen, J. (2025, April 30). *Nash equilibrium: How it works in game theory, examples, plus prisoner's dilemma*. Investopedia.
- Chitra Sharma v. Union of India*, AIR ONLINE 2018 SC 1215 (Supreme Court of India, 2018).
- Coase, R. H. (1960). The problem of social cost. *Journal of Law and Economics*, 3, 1–44. <https://doi.org/10.1086/466560>.
- Dev, A. (2022, March 26). NCLT move: Homebuyers panic, Supertech promises to deliver. *The Times of India*.
- Dutta, S. (2018). Real estate asset specificities and deadlocks under corporate insolvency regimes. *Journal of Property Law & Practice*, 14(2), 112–134.
- Flat Buyers Ass'n Winter Hills - 77, Gurgaon v. Umang Realtech Pvt. Ltd., Company Appeal (AT) (Insolvency) No. 926 of 2019 (National Company Law Appellate Tribunal, February 4, 2020).
- Flat buyers of Supertech's Twin Towers will be refunded in full: SC. (2022, August 28). *The New Indian Express*.
- Haidar, F. (2025, July 27). Supertech homebuyers seek CJI, PM intervention to let NBCC complete projects. *ET Realty*.
- Indiabulls Asset Reconstruction Co. Ltd. v. Ram Kishore Arora*, Civil Appeal No. 1925/2023 (Supreme Court of India, May 11, 2023).
- Insolvency and Bankruptcy Board of India (Insolvency Resolution Process for Corporate Persons) Regulations, 2016, Gazette of India, pt. III sec. 4 (India).

- Insolvency and Bankruptcy Code (Amendment) Act, 2019, No. 26, Acts of Parliament, 2019 (India).
- Insolvency and Bankruptcy Code (Second Amendment) Act, 2018, No. 26, Acts of Parliament, 2018 (India).
- Insolvency and Bankruptcy Code, 2016, No. 31, Acts of Parliament, 2016 (India).
- Investopedia Team. (2025, May 14). *What is the prisoner's dilemma and how does it work?* Investopedia.
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305–360. [https://doi.org/10.1016/0304-405X\(76\)90026-X](https://doi.org/10.1016/0304-405X(76)90026-X).
- Kaldor-Hicks efficiency. (2025). In *The SAGE encyclopedia of business ethics and society* (2nd ed.). SAGE Publications.
- Király, B., Varga, T., Szabó, G., & Garay, J. (2024). Evolutionarily stable payoff matrix in kahawk–dove games. *BMC Ecology and Evolution*, 24, Article 65. <https://doi.org/10.1186/s12862-024-02257-8>.
- Kokorin, I. (2020). Promotion of group restructuring and cross-entity liability arrangements. *Journal of Corporate Law Studies*, 21(2), 557–593. <https://doi.org/10.1080/14735970.2021.1925484>.
- Lee, S. (2025, June 16). *Payoff matrix: The key to strategic success*. Number Analytics.
- Mansi Brar Fernandes v. Shubha Sharma*, Civil Appeal No. 3826 of 2020 (Supreme Court of India, September 12, 2025).
- Meegan, D. (2023, October 4). *The true story of the birth of the prisoner's dilemma*. Optimally Irrational.
- Mohan, A., & Raj, V. (2020). Conflating consumers with lenders: The flawed legal status of homebuyers in corporate bankruptcy. *Commercial Law Review*, 45(3), 201–225.
- Myerson, R. B. (1999). Nash equilibrium and the history of economic theory. *Journal of Economic Literature*, 37(3), 1067–1082. <https://doi.org/10.1257/jel.37.3.1067>.
- NCLT orders insolvency proceedings against Supertech Ltd. over ₹432 crore default. (2022, March 26). *The Hindu*.
- Olson, M. (1965). *The logic of collective action: Public goods and the theory of groups*. Harvard University Press.
- Olson, M. (1982). *The rise and decline of nations: Economic growth, stagflation, and social rigidities*. Yale University Press.

- Pandey, R., & Anthwal, A. (2024). Re-examining the classification of homebuyers as financial creditors under the Insolvency and Bankruptcy Code. *Solventia*, 1, 22–45.
- Pioneer Urban Land and Infrastructure Ltd. v. Union of India*, AIR 2019 SC 4055 (Supreme Court of India, 2019).
- Ram Kishor Arora v. Union Bank of India*, Company Appeal (AT) (Insolvency) No. 406 of 2022 (National Company Law Appellate Tribunal, June 10, 2022).
- Real Estate (Regulation and Development) Act, 2016, No. 16, Acts of Parliament, 2016 (India).
- Satish Chander Verma v. Grand Reality Pvt. Ltd., Civil Appeal Nos. 7097-7099 of 2025 (Supreme Court of India, May 30, 2025b).
- Satish Chander Verma v. Grand Reality Pvt. Ltd., Company Appeal (AT) (Insolvency) No. 289 of 2023 (National Company Law Appellate Tribunal, July 15, 2025a).
- Simon, H. A. (1955). A behavioral model of rational choice. *The Quarterly Journal of Economics*, 69(1), 99–118. <https://doi.org/10.2307/1884852>.
- Singh, R., & Thakkar, H. (2021). Settlements and resolutions under the Insolvency and Bankruptcy Code: Assessing the impact of COVID-19. *The Indian Economic Journal*, 69(3), 395–412.
- Tarun Ahuja v. Puri Construction Pvt. Ltd.*, C.P. (IB) No. 755/PB/2020 (National Company Law Tribunal, January 24, 2024).
- Union Bank of India v. Supertech Ltd.*, C.P. (IB) No. 223/ND/2022 (National Company Law Tribunal, New Delhi Bench-IV, February 14, 2023).
- Williamson, O. E. (1975). *Markets and hierarchies: Analysis and antitrust implications*. Free Press.
- Williamson, O. E. (1991). Comparative economic organization: The analysis of discrete structural alternatives. *Administrative Science Quarterly*, 36(2), 269–296.
- Williamson, O. E. (1999). Public and private bureaucracies: A transaction cost economics perspective. *The Journal of Law, Economics, and Organization*, 15(1), 306–342.