



भारतीय दिवाला और शोधन अक्षमता बोर्ड

Insolvency and Bankruptcy Board of India

**Report of the Working Group
on
Tracking Outcomes under the Insolvency and
Bankruptcy Code, 2016**

10th November, 2021

WORKING GROUP ON TRACKING OUTCOMES UNDER THE IBC

10th November, 2021

To,

Chairperson
Insolvency and Bankruptcy Board of India
Jeevan Vihar Building, New Delhi- 110001

Dear Sir,

The Working Group on Tracking Outcomes of Insolvency and Bankruptcy Code, 2016 (IBC) constituted on 24th May, 2019, have the privilege and honour to present its Report to the Insolvency and Bankruptcy Board of India.

2. The Working Group, after rounds of detailed deliberations, has come out with a comprehensive framework for developing a metrics for measuring the outcomes of IBC to objectively evaluate the achievements under the IBC.

3. We thank the Insolvency and Bankruptcy Board of India for setting up this group and facilitating the logistical support to accomplish this important aspect relating to the new insolvency and bankruptcy regime ushered in by the enactment of the IBC. We believe that the framework for measuring outcomes of the IBC recommended by this Working Group would help researchers and policy makers to appreciate the nuances involved in evaluating the outcomes of this new law and guide them to adopt a holistic approach instead of approaching the issue on a piecemeal basis.

Yours sincerely,



(G.N. Bajpai)
Chairperson

Sd/-
(Mahesh Vyas)
Member

Sd/-
(Subhashish Gangopadhyay)
Member

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(Dipankar Gupta)
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I. INTRODUCTION

The Insolvency and Bankruptcy Code, 2016 (IBC/Code) provides for resolution of stress of a company, a limited liability partnership, a proprietorship, or partnership firm, or an individual. The stipulations under the Code are being implemented in a phased manner. Currently provisions relating to corporate insolvency (resolution process, liquidation process and voluntary liquidation process), and individual insolvency dealing with resolution and bankruptcy process of personal guarantors to corporate debtors (CDs) are in operation. The provisions relating to individual insolvency dealing with fresh start process, proprietorship, and partnership firms and other individuals are yet to come into force. **This report, therefore, limits to corporate insolvency, which has been in vogue for over five years now, nevertheless, the principles and recommendations made herein can be used in the context of individual insolvency as well.**

2. For reasons within its control or otherwise, a company may experience stress in terms of mismatch in the assets and liabilities in its balance sheet, which may eventually lead to situation of default. Elementary economics indicates that when a company has inadequate assets, claim of an individual creditor may be consistent with its assets while claims of all creditors put together may not. In such a situation, creditors may rush to recover their claims before others do, triggering a run on the company's assets. They recover on a first come first served basis till the assets of the company are exhausted, bleeding the company to death. This is termed as negative-sum game.

3. On the other hand, the IBC provides for reorganisation to rescue a distressed company if its business is viable or close it if its unviable, through a market driven process. In case of rescue, the company is reorganised as a going concern. The claims of creditors are restructured, which may be paid to them immediately and/ or over time. In case of closure, the assets of the company are sold, and the proceeds are distributed to creditors immediately as per the priority provided in the waterfall mechanism. The IBC entrusts the responsibility of reorganisation of a stressed company to financial creditors (FCs), not only because they have the capability to take business decisions and the willingness to restructure their claims, but also their interests are aligned with the interest of the company having going concern surplus, making it a positive-sum game.

Resolution Strategy

4. The Code enables the stakeholders to trigger corporate insolvency resolution process (CIRP) of a company for resolution of stress when it has committed a threshold amount of default. If triggered, the company moves away from 'debtor-in-possession' to 'creditor-in-control'; in such a situation, management of company and its assets vests with an insolvency professional (IP), who runs the company as a going concern, and a committee of creditors (CoC) is constituted to evaluate options for the company. The IP invites feasible and viable resolution plans from eligible and credible resolution applicants for resolution of insolvency of the CD. If the CoC approves a resolution plan within the stipulated time with 66 per cent majority, the CD continues as a going concern. If the CoC does not approve a resolution plan with the required majority within this period, the CD mandatorily undergoes liquidation. The Code tries, by divesting the erstwhile management of its powers and vesting it in a professional, to continue the business of the CD as a going concern until a resolution plan is drawn up. Then the management is handed over under the plan so that the CD can pay back its debts and get

back on its feet. All this is done within a period of six months with a one-time extension of up to 90 days or else the chopper comes down and the liquidation process begins.¹

5. The resolution strategy has broadly three elements.

5.1 Prevention: The Code resolves financial stress where it could not be prevented. It has several provisions to prevent such stress. There is a credible threat that if a company defaults, and consequently gets into CIRP, in all probability, it would move away from the hands of current promoters / management, most probably, for ever. Firstly, because the promoters may not be eligible to submit a resolution plan. Second, even if eligible, they may not submit the most competitive plan. This deters the management and promoters of the company from operating below the optimum level of efficiency and motivates them to make the best efforts to avoid default. It encourages them to settle default with the creditor(s) at the earliest, preferably outside the Code. There have been thousands of instances where debtors have settled their debts voluntarily or settled immediately on filing of an application for CIRP with the Adjudicating Authority (AA) before the application is admitted. The Code has thus brought in significant behavioural changes and thereby re-defined the debtor-creditor relationship. With the Code in place, the defaulter's paradise is lost.² Repayment of loan is no more an option; it is an obligation.

Similarly, the CIRP undoes avoidance transactions, and requires the beneficiary of such transactions to disgorge the value, and thereby takes away the incentive to indulge in vulnerable transactions. Since such transactions are considered criminal in certain circumstances, particularly when it is fraudulent, it disincentivises a potential miscreant. Such incentives and disincentives are likely to ensure that there is no vulnerable transaction. In such a case, value resides with the company and consequently, the possibility of a company getting into stress is less.

5.2 Start Early and Close Timely: The IBC entitles the stakeholders to initiate CIRP as soon as there is threshold amount of default to prevent the stress from ballooning to unresolvable proportions. In early days of default, enterprise value is typically higher than the liquidation value and hence the stakeholders would be motivated to resolve insolvency of the company rather than to liquidate it. The creditor knows the consequences of default by a debtor if insolvency proceeding is not initiated or the insolvency is not resolved. It is motivated to resort to more responsible lending to reduce incidence of default. Further, although a creditor has the right to initiate a proceeding under the Code as soon as there is a default of the threshold amount, it is not obliged to do so at the first available opportunity if it has reasons for the same. It may not, however, defer the initiation of proceeding indefinitely, allowing ballooning of default. It may have to explain to itself and its stakeholders why it initiated an insolvency proceeding or why it did not, in case of a default, and suffer consequences of its actions of omission or commission.

Section 66(2) of the Code makes the directors liable for the loss to the creditors that arise during twilight zone. The twilight zone begins from the time when a director knew or ought to have known that there was no reasonable prospect of avoiding the commencement of resolution process till the company enters resolution process. During this period, a director has an additional responsibility to exercise due diligence to minimise the potential loss to the creditors

¹ *M/s. Innoventive Industries Ltd. v. ICICI Bank & Anr.*, (2018) 1 SCC 407.

² *Swiss Ribbons Pvt. Ltd. & Anr. v. UOI & Ors.*, (2019) 4 SCC 17.

and he is liable to make good such loss. This incentivises the corporate as well as its promoters and managers to seek resolution in early days of stress when possibility of resolution is higher.

The Code requires resolution in a time bound manner as undue delay is likely to reduce the organisational capital of the company. When the company is not in pink of its health, prolonged uncertainty about its ownership and control may make the possibility of resolution remote, impinging on economic growth. The Code requires that a CIRP shall mandatorily be completed within 330 days, including any extension of time as well as any exclusion of time on account of legal proceedings. In fact, timeline is the USP of the Code. The Code segregates commercial aspects of insolvency resolution from judicial aspects and empowers stakeholders and AA to decide matters within their domain expeditiously.

5.3 Closure of unviable company: For a market economy to function efficiently, the process of creative destruction should drive out failing, unviable companies continuously. It was not happening hitherto in the absence of an effective mechanism. Quite a few companies got stuck up in '*chakravyuha*' of unsustainable business or with idle assets and no business. The Code provides a mechanism for a company, where resolution is neither possible nor desirable, to exit with the least disruption and cost and release idle resources in an orderly manner for fresh allocation to efficient uses.

6. The Code thus: (a) endeavours to prevent insolvency; (b) provides a market determined and time bound mechanism for resolution of insolvency, wherever possible, along with facilitators for quick and effective resolution; and (c) promotes ease of exit, wherever required. It enables the optimum utilisation of resources, all the time, either by (a) ensuring efficient resource use within the company through resolution of insolvency; or (b) releasing unutilised or under-utilised resources for efficient uses through closure of the company.

Objective of the Code

7. It is important to note the objective of the Code to remain focussed on its chartered path and not get swayed away by noises being made by the vested interests. The Code provides for reorganisation and insolvency resolution of corporate persons, partnership firms and individuals in a time bound manner for maximisation of the value of assets of such persons, to promote entrepreneurship, availability of credit and balance the interests of all the stakeholders.³ **The first order objective of the Code is resolution. The second order objective is maximisation of value of assets of the firm and the third order objectives are promoting entrepreneurship, availability of credit and balancing the interests of stakeholders. This order of objectives is sacrosanct.**⁴ An effective legal framework for timely resolution of insolvency and bankruptcy supports development of credit markets and encourages entrepreneurship. It also improves Ease of Doing Business and facilitates more investments leading to higher economic growth and development.⁵

8. The sole object of the Code is reorganisation, as stated in its long title. Reorganisation has several benefits, namely, it promotes entrepreneurship, improves credit availability, maximises the value of assets of the company, etc. It may be useful to refer to the Tinbergen Rule here. This rule, named after the first Nobel laureate in economics science, Jan Tinbergen, prescribes a basic principle of policy efficacy that the policy makers should have at least one policy tool

³ Long title to the Insolvency and Bankruptcy Code, 2016.

⁴ *Binani Industries Limited v. Bank of Baroda & Anr.*, CA (AT) No. 82,123,188,216 & 234 -2018.

⁵ Statement of Objects and Reasons to the Insolvency and Bankruptcy Code, 2015.

for each policy target. There can be more than one policy to achieve one target but having one policy to achieve more than one target is troublesome. It is not easy to kill more than one bird with one stone, particularly when the birds are flying in different directions. There can be many tools for reorganisation. In fact, there are. One may reorganise under RBI's Prudential Framework, the Companies Act, 2013 and even outside any formal framework. **Any evaluation of the working of the IBC must be cognisant of the objective of the Code. It may not be fair to evaluate its working in relation to its effectiveness in achieving objectives which were not intended.** At a preliminary level, it may be advisable to look at how the IBC has reorganised or resolved insolvency of the CD, in sync with the objective of the Code and if so, at what cost and in what time frame, and the quality of resolution in terms of value maximisation.

9. *Value maximisation:* The Code enables maximisation of the value of the assets of the CD by requiring the creditors to make a collective endeavour to revive the failing CD and improve utilisation of the resources at its disposal. If revival is not possible, the Code releases resources for other efficient uses. In either case, the value of the assets of the CD improves. It prevents depletion of value by enabling early initiation of the process for revival and its expeditious conclusion. The Code envisages anybody and everybody, including the promoters, if eligible, to propose resolution plans and empowers the CoC to choose the best of them. It envisages limitless possibilities of resolution - turn-around, buy-out, merger, acquisition and takeover etc. It mandates the Resolution Professional (RP) and the Liquidator to determine, if the CD has been subject to vulnerable transactions (preferential transactions, fraudulent transactions, undervalued transactions, and extortionate transactions) in the past, and if so, one is obliged to file an application with the AA for claw back of the lost value.

10. *Promoting entrepreneurship:* Unused or under-used productive resources is anathema for the growth of a country and people. By rescuing viable businesses through the insolvency process and closing non-viable ones through liquidation, it is releasing resources, including entrepreneurs. The reallocation of resources to more efficient uses is essential to optimise the economic cycle. A company may fail to deliver as planned in the face of competition and innovation and consequently, may default in payment of its obligations. The Code attempts to reduce the incidence of failure by incentivising its prevention, rescuing failing businesses, wherever possible, and releasing resources from failed businesses, wherever required. It enables an honest entrepreneur to make an orderly exit if the enterprise fails despite the best of intentions and efforts. Thus, the possibility of failure does not hold up an entrepreneur from commencing a business, implementing a new idea and/or running the enterprise.

11. *Enhances availability of credit:* Corporate finance is presently skewed with very negligible corporate debt, non-bank loans, and unsecured loans. Through provisions for resolution and liquidation, the Code enables creditors to recover their dues from either future earnings, post-resolution, or sale of liquidation assets. It incentivises creditors - secured and unsecured, bank and non-bank, financial and operational, foreign, and domestic - to extend credit at lower costs, particularly when they have rights under the Code to initiate CIRP in case the CD defaults.

12. Further, the rising non-performing assets (NPAs) create a vicious cycle where entrepreneurs with feasible projects are priced out and lenders end up financing the riskier ventures who are willing to borrow at such high costs. Through provisions for resolution and liquidation, it is expected that the Code would enable lenders to recover funds from either future earnings, post-resolution, or sale of liquidation assets. The Code would also help address the problem of rising NPAs and enable optimum utilisation of resources.

13. *Balancing interests of all stakeholders:* The stakeholders have different rights on the assets of the CD under contracts or special enactments. The Code has set the priority of stakeholders in the shape of a waterfall in case of liquidation. It prescribes certain minimum protection for certain stakeholders at the stage of the CIRP. It requires the resolution of insolvency within a framework of fairness and equity in a way that maintains the incentives of all stakeholders in the project.

14. Beyond the explicit statutory objectives, the Code rescues failing CDs and thereby **rescues the employment of several employees and their livelihood**. In the absence of CIRP, the CD would have suffered a natural death. Allocative efficiency requires that the resources in an economy be put to their most efficient use. The economic goal of allocative efficiency is the maximisation of social welfare. An effective corporate insolvency law can help this process by enabling the reallocation of ‘inefficiently utilised resources’ and ‘ousting of inefficient participants’ from the market. A robust corporate insolvency regime can help foster growth and innovation by enabling efficient allocation of resources (from failing or failed companies to efficient companies). In keeping with this understanding, the Code also promotes competition and innovation and thereby promotes growth.

15. The Code has triggered a systemic response to the underlying attitudinal problems in the **creditor-debtor relationship** and is acting as a prophylactic for an acute condition. Initiation of insolvency proceedings at the early stage of default increases chances of resolution thereby enabling bankers to keep an earning asset on their books during the term of a loan. The difficulty in explaining the undue delay in using the Code may discourage any unholy ties between lender and borrower, consequently reducing the chances of high-value defaults and frauds. A deeper, healthy, and desirable change for banks is the obligation they now feel towards more responsible and clean lending, to begin with. For the business debtor, the threat of a resolution process shifting control of the company away from the promoters is real and is serving as an effective deterrent. They have every incentive to not default or operate at below optimal levels leading to distress conditions. The debtors are encouraged to settle default with the creditor(s) at the earliest, preferably before an IBC process is initiated.

II. NEED FOR A FRAMEWORK TO TRACK THE OUTCOMES OF THE CODE

Differing perspectives

16. Every economic reform, including insolvency reform, does somewhat recast the rules of the game for market participants with a view to increasing overall economic wellbeing. As such, it may affect the interests of participants differently: some stand to gain while others may lose, as compared to the old order. It is unlikely that a loser or a gainer, who is generally blinded by self-interest, will holistically and objectively assesses the outcome of the reform. One tends to cite purposive examples to buttress its perspectives. A beneficiary of the old order, for example, may cite the likes of Ghotaringa Mineral Limited and Orchid Healthcare Private Limited to cry foul of the insolvency reform. It may claim that insolvency proceedings of these two companies under the Code realised precious little for creditors as against their claims of a few thousand crore rupees. It may not, however, posit that these companies had absolutely no assets when they entered the insolvency proceedings. Thus, interested parties are likely to paddle their perspective as assessment which may not reflect correct position and may even present a distorted picture and malign the reforms.

17. A dispassionate analyst, who looks at the reform from a macro perspective, is likely to use a metric that is readily available, easily understood, and amenable to analysis, rather than what is the most appropriate. Reliable figures about recovery through an insolvency proceeding are readily available. Recovery, both in absolute and relative sense, is easily understood. It can be used to compare resolution of one company with that of another, or to compare different options of resolution and recovery. Some analysts may prefer to use recovery as the metric to assess outcome of insolvency reforms because of its convenience, even though it is not an explicit objective of insolvency reforms, and it arises as a by-product of some insolvency proceedings. Time taken for closure of insolvency proceedings is another convenient metric. An optimistic analyst may observe the time taken under the Code as compared to that under erstwhile regimes, while a passionate critic may focus on the gap between the time taken and the time envisaged under the Code.

18. Some of the convenience metrics could be misleading. Recovery, though a precise metric, is not unambiguous. The resolution plans under the Code recover, on average, about X% of admitted claims of creditors. Such a level of recovery could be good for someone as, of the available options, it recovers the best. This may not be so good for another, as it entails a haircut of Y% for creditors. Further, recovery as a percentage of the admitted claims may not make much sense. What could be realised is reflected by the liquidation value of the assets available in the books of the debtor. What should be realised is reflected by the written down value of the debt in the books of the creditor. Recovery as compared to what should or could be realised presents a picture entirely different from X% or Y%.

19. A student of law and economics looks at insolvency reform from a much deeper perspective. One believes that every economic actor has bounded rationality and cannot anticipate all possible contingencies. That is why it enters into contracts and renegotiates and modifies its terms, as and when circumstances change, and yet every contract at any point of time remains an incomplete one, with gaps and missing provisions. Nobel laureate in Economic Sciences, Mr. Oliver D. Hart argues that a company enters into a series of incomplete contracts which allow every creditor foreclosure rights over the company's assets in lieu of credit. Every creditor feels comfortable on a standalone basis and the company meets commitment towards each creditor in a normal course and life goes on. However, when the company is stressed, it can honour claims of one or a few creditors fully, but not all creditors simultaneously. It is a

situation where the claim of an individual creditor is consistent, but the claims of all creditors together is inconsistent with the assets of the company. If every creditor sticks to its pre-insolvency rights, neither resolution of stress is possible, nor can a creditor realise its dues.

20. The insolvency framework endeavours to resolve such stress while discharging obligations towards creditors to the extent realistically possible under the circumstances. Insolvency reform is thus an overarching contract that completes all incomplete bilateral and multilateral contracts, makes claims of all creditors consistent and prevents a value reducing run on the assets of the company with the aim to rescue the debtors and creditors. But for the overarching contract, the parties would enforce a series of incomplete contracts, which may wipe out the debtor and write off some creditors. The overarching contract enforces all the incomplete contracts, while trying to save the debtors and creditors. Assume that the contract enforcement takes four years in a country while an insolvency proceeding takes a year. A student of law may use time saved in contract enforcement as the metric, while a student of economics may use the loss avoided to the debtors and creditors. Given that contract enforcement is fundamental to markets, a policy maker may consider improvement in ease of doing business and consequently economic growth as the metric.

21. Freedom is paramount for a businessman. Higher the level of freedom, easier it is to do business in an economy. As Mahatma Gandhi observes: “*Freedom is not worth having if it does not include the freedom to make mistakes.*” A businessman needs freedom to start a business when he finds an opportunity, and freedom to get out of the business when he fails. He typically commences a business when he has reassurance of exit. He fails when he becomes a victim of Schumpeterian ‘*gale of creative destruction*’, where the business is failing to earn normal profits, either because it is outdated, the space is overcrowded or resources are inefficaciously husbanded. Higher the intensity of competition and innovation in an economy, higher is the rate of failure, higher is the incidence of sunrise businesses replacing the sunset ones, and higher is the need for freedom to exit. An honest businessman uses the degree and quality of freedom to exit from business as the metric to assess the outcome of insolvency reform.

22. The parable of the blind men and an elephant illustrates the above narrative, where each of the seven blind men describes an elephant based on his own limited experience. Like the description of an elephant by one person, a single metric may fail to adequately capture the outcome of insolvency reform. The World Bank Doing Business Report (DBR) uses a composite metric, which studies the time, cost and recovery of insolvency proceedings and strength of the insolvency framework to arrive at a score for resolving insolvency for an economy. It has its limitations given that the methodology has been drawn up to cater to about 200 countries, each of which has had a unique experience in insolvency outcomes.⁶

23. A metric is not a onetime affair. It requires careful nurturing and improvisation over years and provision of authentic data and information for generation of metrics. In different spheres, specialised organisations have come up to maintain and service different metrics. It is time to sow the seeds of a sound metric(s) for measuring the outcomes when the insolvency reform is taking deeper roots. The metric(s) should holistically and objectively measure the outcome, involving evaluation of the structure, processes and designs of the market contributing to its fairness, integrity, and credibility in each of the segments, namely, corporate insolvency and liquidation, and individual insolvency and bankruptcy. If no guidance is available as to what is

⁶ This World Bank Report has since been discontinued since September, 2021.

an appropriate metric, and there is no provision of data / information to service such a metric, the market may use any metric of convenience, which may do more harm than good to the cause of reform.

24. Once the suitable metric is available and can be populated, it can be harnessed towards data-driven policy making for the future course of the law. It will allow authorities to improve their risk management abilities and produce potent results. It has the additional benefit of generating rational public debate on policies and thereby helps in crowdsourcing of ideas for good policy response. Designing policies without robust data is a difficult task and equally difficult is to measure the outcomes of such policies. It is imperative to have a framework that would steer relevant data creation and dissemination and at the same time encourage useful research in the matters of policy design and implementation.

25. Recently, two institutions of international repute have stirred the discourse on the impact and policy challenges created by data gathering and dissemination in structuring insolvency regimes. The researchers at the International Monetary Fund (IMF) in their Working Paper⁷ have endeavoured to outline, *inter alia*, the development of data gathering systems that will support the analysis of insolvency regimes across the world. In doing so, a general assessment of the data sources along with the delineation of the diverse array of data available within these sources has been carried out. Another twig in this emerging stream of research is the formulation of a new set of indicators on the insolvency regimes by Organisation for Economic Co-operation and Development (OECD)⁸, which gather information on the design of insolvency regimes that are relevant for smooth exit or effective restructuring of failing firms. **The Working Group (WG) examined the international practice in gathering insolvency and bankruptcy related data and saw that there are substantial cross-country variances across various parameters that structure bankruptcy laws and procedures.**

26. The outcomes of the Code have started playing out since its enactment. Direct outcomes of the Code such as improvement in realisations by creditors, timely resolution of the CD and decrease in insolvency resolution process cost are clearly visible on the ground and have been acknowledged by different reports and institutions, including the DBR for the year 2020. Other than the direct or measurable outcomes of the Code, certain outcomes that are qualitative in nature have also started panning out. One of the most visible qualitative outcomes that the Code has brought about is the behavioural change in creditors and debtors.

27. **There is presently no standard framework to track the outcomes of insolvency and bankruptcy regime in various jurisdictions**, other than the DBR indicators. The World Bank indicators, which are designed in the context of ease of doing business, have limitations to track or measure the outcome of an insolvency regime. The availability of data to enable a meaningful appreciation of the performance of an insolvency regime is also limited. **In the absence of a standardised framework and centralised data bank, it is important to design a framework for the assessment of the performance of the insolvency regime in the country in terms of its effectiveness, efficiency, and efficacy.** Such a framework would inform various stakeholders, in a structured manner, of the outcomes of the new regime, and enable organisation and availability of information required for the framework. A dynamic

⁷ Garrido J. *et al* (2019), The Use of Data in Assessing and Designing Insolvency Systems, IMF Working Paper No. 19/ 27, February 28.

⁸ Going for Growth 2018- Policies for Productivity: The Design of Insolvency Regimes across Countries, OECD.

framework would steer relevant data creation and dissemination and at the same time encourage useful research in matters of policy design and implementation.

28. A single metric or a composite of metrics often does not capture softer aspects such as humanitarian approach to dealing with insolvency, or behavioural changes of stakeholders. They also generally do not capture the systemic gains such as induced resolutions outside the Code, rescue of entrepreneurs from deeper perils, rescue of companies in deep distress, release of idle resources for productive uses, and improved availability of credit. A metric tends to capture what can be measured and ignores matters that matter but cannot be measured. As Elliot Eisner puts: *‘Not everything that matters can be measured, and not everything that can be measured matters.’*

29. A well laid metric, instead of measuring outcome, may influence the outcome. In other words, when we set one specific parameter as a measure of outcome, there is a tendency to score high on that parameter, and even game the same, overlooking other equally, or even more important aspects and dimensions of the outcome. Goodhart’s Law cautions: *‘When a measure becomes a target, it ceases to be a good measure.’*

30. The WG is of the view that it is essential to capture both quantifiable and non-quantifiable outcomes of the Code. Analysis of both qualitative and quantitative parameters can be undertaken at different points in time- *ex-ante*, *interim* and *ex-post* efficiency.

III. CURRENT DATA SOURCES

31. Currently, most of the data with respect to processes under the Code, namely, CIRP, liquidation, voluntary liquidation, individual insolvency, and financial service providers is maintained and disseminated by the Insolvency and Bankruptcy Board of India (IBBI). It regularly posts information pertaining to orders issued by Tribunals and Courts, and the details of Insolvency Professionals (IPs), Insolvency Professional Agencies (IPAs), Information Utilities (IUs), Insolvency Professional Entities (IPEs), Registered Valuers (RVs), and Registered Valuer Organisations (RVOs) on its website.

32. The IBBI tracks and publishes the following outcomes of various corporate processes under the Code on a quarterly basis in its newsletters and on an annual basis in its annual report.

Insolvency Resolution

- (a) Quarterly summary statistics of CIRPs admitted, closed for various reasons and ongoing.
- (b) Sector-wise distribution of CIRPs admitted and closed.
- (c) Timeline of the conclusion of CIRPs.
- (d) Amount of claims admitted in case of cases withdrawn under section 12A and reasons for such withdrawal.
- (e) Distribution of stakeholders triggering the resolution process- Number of CIRPs initiated and closed by operational creditors (OCs), FCs, and CDs.
- (f) Details of CIRPs ending with liquidation in terms of the status of the CD at the time of commencement (i.e. whether it was in BIFR or non-functional or both and whether its resolution value was higher or lower than the liquidation value).
- (g) Details of CIRPs yielding resolution, in terms of date of commencement; date of approval of resolution plan, admitted claims, liquidation value, realisable value by FCs etc.

Liquidation

- (h) CIRPs ending with orders for liquidation in terms of whether they were defunct or not, who initiated the CIRP and time taken since the commencement of CIRP and order of liquidation.
- (i) Status of liquidations in terms of ongoing, submission of the final report and closed by dissolution.
- (j) Reasons for liquidation such as non-receipt of resolution plan for approval by the AA, CoC's decision to liquidate the CD, etc.

Voluntary Liquidation

- (k) Number of cases of voluntary liquidations filed quarterly, with their paid-up capital, outstanding credit, assets and dissolution orders passed;
- (l) Reasons for initiation of voluntary liquidation;
- (m) Status of voluntary liquidations in terms of number initiated and closed along with the time taken in completion of the process;
- (n) Realisation under voluntary liquidation in terms of realisation of assets, amount due and paid to the creditors and liquidation expenses.

Status of Twelve Large Accounts

- (o) Resolution of twelve large accounts was initiated by banks, as directed by the Reserve Bank of India (RBI). The outcome of large accounts that ended with resolution plans in terms of amount admitted and realised, realisation as percentage of claims and liquidation value and successful resolution applicant is published.

Individual Processes

(p) Details of applications filed in terms of several applications, the debt amount, guarantee.

Financial Service Providers

(q) Details of cases admitted (as of end of March, 2021 only one case of the financial service provider was admitted)

IV. WORKING PROCESS OF THE WORKING GROUP

33. The IBBI constituted a WG in May, 2019 (composition of WG at **Annexure**) with the mandate to suggest a framework for tracking the outcomes of the Code *vis-à-vis* its objectives, including:

- (a) identification of quantitative and qualitative parameters;
- (b) institutional arrangement (s) for capturing the parameters;
- (c) manner of using the identified parameters.

34. The WG held its first and second meetings on 24th July, 2019 and 23rd August, 2019 respectively. The WG held discussions around the types of data or likely indicators/parameters/proxies; formal institutional arrangements for capturing the parameters and manner of using the identified parameters for each of the six foundational objectives of the Code, viz., resolution of stress; maximisation of value of assets; promoting entrepreneurship; enhancing the availability of credit; balancing of interests of all stakeholders and establishing an ecosystem, to serve as a framework for tracking outcomes of the processes under the Code. Discussions also revolved around how to capture the overall impact of the Code on employment and economic growth and behavioural changes the Code has brought about amongst the creditors and debtors.

35. Based on the discussions, the WG has identified the following six layers of outcomes of an insolvency and bankruptcy regime:

- (a) The growth, strength and efficiency of the **insolvency ecosystem** consisting of IPs, IPAs, IPEs, RVs, RVOs, IUs, AA, Appellate Tribunal, IBBI, Government, Courts, etc.;
- (b) The strength, efficiency, and efficacy of the **processes**, namely, corporate insolvency resolution, corporate liquidation, voluntary liquidation, pre-packaged insolvency resolution, fresh start process, resolution of personal guarantors to corporate debtors, resolution of proprietorship and partnership firms, individual insolvency resolution, bankruptcy, etc.;
- (c) The growth and efficiency of markets such as **markets** for interim finance, resolution plans, liquidation assets, insolvency services, along with cost efficiency, information efficiency, etc.;
- (d) The impact **on businesses** in terms of cost of capital, capital structure, availability of credit, entrepreneurship, capacity utilisation, creative destruction, competition, innovation, etc.;
- (e) **Behavioural changes** amongst the debtors and creditors, trust of the creditors in debtors, meritocratic lending, non-observable impact, humanitarian considerations, proactive/preventive impact of the Code, etc. and
- (f) The **overall impact** on employment, income, and economic growth of the nation.

V. SUGGESTED FRAMEWORK

36. To begin with, a framework for measuring outcomes with respect to CIRP is proposed by the WG in light of the identified six layers of outcomes of the Code. The WG suggests the following framework for measuring outcomes of the Code, juxtaposing the objectives of the Code against **three Es**⁹ of measuring outcomes of Code as follows:

- (a) **Effectiveness:** This is the measure of the extent to which an insolvency system achieves its intended objectives.
- (b) **Efficiency:** This is the measure of the extent to which the insolvency system achieves those objectives with the minimum use of resources. It measures the relationship between inputs and outputs. In effect, an efficient system would translate into a quick resolution of financial distress with maximum recovery and minimum costs. An efficient insolvency framework fosters liquidation of non-viable businesses, reallocation of assets to more productive uses and rehabilitation of viable businesses through debt restructuring. Analysis can be undertaken at different points in time - *ex-ante*, *interim* and *ex-post* efficiency.
- (c) **Efficacy:** This is the measure of the extent to which there exists a connection or contribution of the insolvency system (sub-system) with the higher-level systems like the legal, economic, and financial systems. Efficacy would ensure securing the objective of protection and maximisation of the value of an insolvent for all the stakeholders and the economy in general.

EFFECTIVENESS

37. **Objective: Maximisation of the value of assets of CD undergoing a resolution process-** The effectiveness parameters proposed to measure this objective include, but are not limited to the following:

- (a) Undertaking a time series analysis of the assets of the CD, pre- and post-CIRP.
- (b) Market capitalisation of the CD viz., the value of the CD traded on the stock market, can be assessed pre and post-CIRP of the CD.
- (c) Enterprise value of the CD, which is the market capitalisation of the company plus debt, both long term and short term, minus cash, and cash equivalents. The enterprise value of the CD, pre and post-CIRP can be compared to assess the value of the assets of the CD.
- (d) Changes in debt-equity ratios (leverage) of the CD, pre- and post-CIRP process.
- (e) Changes in the asset turnover ratio of the CD, pre- and post-CIRP to assess continuity of operations during CIRP.
- (f) The capital structure of the resolved entity.

38. **Indicative Methodology** - The indicators mentioned above need to be observed and measured in a macro sense. This data can be acquired from RBI and Ministry of Statistics and Programme Implementation. The WG is of the view that it would be useful to begin by measuring the value of assets of the CD over time. It is possible to visualise a trend of the value of various indicators of assets of the CD over time; starting from when it was not a stressed asset, through its period of stress and the period post-resolution. The indicators may include the following:

- (a) Net fixed assets and its break-up in terms of plant and machinery, land and buildings, transport equipment, furniture, fixtures, intangible assets, etc.
- (b) Net worth, net of revaluation reserves
- (c) Market capitalisation and enterprise value

⁹ Drawn from the suggestions by IMF- refer footnote 7.

39. Once a time series data of such indicators is available, it is possible to study the effect of various events and actions on the valuation. It is possible that such impact can be seen only with a lag but nevertheless, it would be useful to see the changes in the value of assets over time as this could facilitate the measurement of possible maximisation of value of assets of the CD. A time-series analysis can draw possible relationships with exogenous and endogenous factors that affect the value of assets of the CD

40. Data with respect to the value of assets of the CD can be obtained from the published audited financial statements of companies. Its compilation would need to be entrusted to skilled officers that can decipher the various entries under the changing accounting standards and disclosures such as Ind AS. Further, sophisticated statistical software and tools need to be employed for time series analysis. If the CD is a listed company, the enterprise value of the CD can be determined through a combination of the stock market and financial statements of the CD. Database of companies maintained by the Ministry of Corporate Affairs on the MCA21 platform is another useful resource.

41. **Objective: *Reduction in financial stress of the CD***- One sure way to reduce corporate stress is for the company to not to have any outside financial obligations or, for banks to have enough collaterals and (implementable) guarantees so that there is no default risk. This would certainly not be an effective solution to CD stress. To be effective in reducing financial stress of the CD, IBC must ensure that

- (a) There is growth in investment;
- (b) There is rise in debt-equity ratios, in the aggregate;
- (c) Credit rationing decreases;
- (d) Cost of debt/capital reduces.

Effectiveness for the above parameters has to be measured essentially in a macro sense.

42. **Indicative Methodology**- The indicators mentioned above will need to be observed and measured in a macro sense. This data can be acquired from RBI, CMIE, Ministry of Statistics and Programme Implementation.

43. **Objective: *Enhancing the availability of credit***- The effectiveness parameters proposed to measure the objective are as follows:

- (a) The effectiveness of the Code in increasing the overall availability of credit in the economy can be measured by tracking the varied parameters that banks employ to assess improvement in recoveries and the subsequent increase in the availability of funds. One such indicator is the measure of gross NPAs of banks and provisions maintained for NPAs. A decline in both figures would indicate an increase in the capacity of banks to lend.
- (b) Tracking the number of upgradations in accounts maintained by banks and the value of recoveries made by them.
- (c) Interest rates, or the terms and conditions for providing credit by creditors in general.
- (d) Outcome of the Code in terms of its effect on the cost of capital: The decline in the cost of capital because of effective and time-bound recoveries under the Code is imperative to increase credit offtake in the economy.

44. **Indicative Methodology** - The indicators identified above to measure credit availability in the economy can be assessed through data published by banks and the RBI. Banks publish details of their stressed assets as well as recoveries and upgradation of accounts in their financial statements. These indicators can be tracked in the short and medium term to assess the change in the health of the financial position of banks and their ability to lend. Further, it

is envisaged that the streamlined and effective process laid down under the Code for resolution of the insolvent CD is bound to affect the willingness of FCs and OCs to lend afresh to a CD after completion of CIRP. This willingness to lend afresh to a CD can be gauged by undertaking primary questionnaire-based surveys of FCs. Similarly, the terms of credit extended by the FCs can be analysed to see if they are favourable or burdensome, reflecting the confidence of creditors in the system of resolution or recovery under the Code.

45. Objective: *Balancing interest of all the stakeholders* - An effective insolvency and bankruptcy law is one that delicately balances the interests of all the stakeholders by imbibing the principles of fairness and equity in its design and implementation. A general understanding of these principles in the context of an insolvency and bankruptcy regime implies that all creditors get a minimum fair share from the resolution or liquidation of the CD. While it is fairly subjective to determine what constitutes being fair and equitable, a proxy indicator to measure it could ideally include the identity of all creditors and their nature (financial, operational, etc.), amount claimed, terms of credit and priority ranking in the claim. Another working formulation to measure fairness could be a comparison between the distribution of what is finally awarded amongst the various creditors and the weighted distribution of the total original claims. The effectiveness parameters proposed to measure the objective are as follows:

- (a) Priority ranking of claims between classes of creditors and within a given class can be studied to evaluate fairness in the treatment of different types of creditors in the proposed resolution plan approved by the CoC.
- (b) A study of the distribution of proceeds of liquidation of the CD among creditors and the weighted distribution of the total original claims can be a proxy to measure equity.

46. Indicative Methodology/Sources - Detailed information with respect to admitted claims of creditors and the amount realised by all creditors from resolution or liquidation of the CD can be gathered from IPs handling various CIRP assignments.

EFFICIENCY

47. Objective: *Maximization of the value of assets*. Under this head, the aim is to answer if the IBC is the least cost method of achieving efficacy and effectiveness. To address efficiency, it is important to emphasize the role played by the IBC. Essentially, it is a dispute resolution mechanism because a CD is in distress when it cannot satisfy all its non-equity financial claims that have become due. Ideally, if there was no asymmetry of information among claimants and the corporate entity, and claims were reorganized in IBC under well-defined principles, unsatisfied claimants will know, before going to IBC, how much they will be able to recover. In this situation, it would be beneficial to all parties to avoid the transaction costs of going through IBC.

48. The efficiency parameters proposed to measure the objective are categorised as follows:

- (a) From the above discussion, it is seen that one obvious measure of efficiency is the proportion of outstanding loans that are restructured before the CD defaults on any obligatory payment. Since informational asymmetry is a given, and different claimants have different, and non-verifiable, subjective probabilities of future outcomes, the procedural cost of IBC cannot ever be fully avoided. However, a more efficient institution will have more entities finding it in their interest to avoid the IBC.
- (b) **Realization** – One of the primary considerations for any stakeholder to initiate CIRP is the amount of realization that can accrue to it upon completion of the process. One measure of realization is calculating realization by FCs and OCs as a percentage of their claims in a

particular CIRP that has yielded resolution and comparing it with realization as a percentage of liquidation value in respect of the CD. Further, the realization by FCs and OCs can be compared with the realization rates under the erstwhile insolvency and bankruptcy regime in the country and in other jurisdictions.

(c) **Time** - Time is the essence of the Code and speedy resolution of the insolvent CD is essential to preserve asset value. To measure the efficiency of the Code with respect to the time-bound resolution of the CD, the total time taken from the date of admission of application for initiation of CIRP to the date of approval of resolution plan or liquidation of the CD by the AA, can be calculated. Another dimension of time-efficiency is the efficiency of the AA in terms of time taken to admit and dispose of an application. One important aspect of the time-bound resolution is the relationship between timely initiation of CIRP and the amount of haircut taken by the creditors upon completion of CIRP.

(d) **Cost** – The total cost involved in the CIRP of a CD can either encourage or discourage stakeholders from initiating the process. An efficient insolvency and bankruptcy regime entails minimum cost and is thus the preferred mode of seeking redressal. Quantitative data on cost indicators (in line with international best practices) such as court/bankruptcy authority fees; fees of the resolution professional; and asset storage and preservation costs etc. can be ascertained to calculate the total cost involved in the completion of CIRP.

49. **Indicative Methodology/Sources** - Data with respect to recovery rates and time is maintained by IBBI. Detailed information related to the cost involved in CIRP is available with IBBI as reported by IPs.

EFFICACY

50. **Objective: Trends in CDs in stress**- The objective of IBC is to bring about resolution of stress in corporate debtors. In other words, the IBC is efficacious if it brings down the number of CDs in stress and the amount of such stress. Since projects are risky, corporate debt must be risky and, therefore, zero default risk loan is simply not desirable or, often, not feasible. This parameter of reduction in CD's stress can be measured in the following ways:

- (a) Number of CDs, with the amount of assets involved, entering bankruptcy proceedings per month.
- (b) Proportion of disputed amount recovered.
- (c) Time taken for final resolution.

Benchmarking the status of (a)-(d) post IBC as against those that existed prior to IBC can then capture its efficacy.

51. **Indicative Methodology** - IBBI maintains detailed CD wise data as well as aggregate data which can be used to measure the above parameters.

52. **Objective: Promoting Entrepreneurship** - The IBC aims to rescue resources of failed enterprises and it also helps rescue entrepreneurs to rediscover entrepreneurship. The WG has the following suggestions in this regard:

- (a) A monitoring mechanism may be set up that tracks the actions of entrepreneurs whose companies had to go through an insolvency resolution process. It would be very useful to trace the business future of such entrepreneurs. Did they set about creating new enterprises or did they decide to retire or were they perpetually mired in endless litigation? Did they switch industries or jurisdictions? Over time, it could be possible to study if they became more successful entrepreneurs or did they fail again or repeatedly.

(b) Tracking the new business endeavours of these entrepreneurs is one way of measuring the promotion of entrepreneurship. Another, and more direct way would be to conduct periodic direct surveys of these entrepreneurs. This could give different insights into the mental makeup and thinking of these entrepreneurs.

(c) A third dimension would be the perspective of the creditors. Do creditors demand a premium on the credit extended to entrepreneurs who had gone through an insolvency resolution process. It is also possible to examine this aspect by studying the behaviour of creditors towards group companies of such entrepreneurs.

53. Indicative Methodology/Sources - There are two sets of indicators to measure growth in entrepreneurship. The first set of indicators are directly correlated with the outcomes under the Code and the second set of indicators are partly correlated because of the consequence of the processes under the Code or affected by the Code. Mapping the growth in the number of 'second-time' entrepreneurs, viz., entrepreneurs or promoters whose businesses have completed CIRP under the Code and have successfully started new ventures post CIRP belongs to the first set of indicators. An upward trend in this indicator reflects the freedom to exit and ease of doing business envisaged under the Code. Mapping the growth trend in 'start-up' activity in the country, especially growth in MSMEs belongs to the second category of indicators.

54. To measure the above identified indicators, researchers can source secondary data from the Ministry of Commerce and Industry or employ a survey-based method for the collection of primary data regarding entrepreneurs' decision to retire or being involved in litigation or switching industries or jurisdictions. Further, over the short and medium-term a study can be undertaken to assess whether these 'second-time' entrepreneurs became successful entrepreneurs or not.

55. Objective: Expanding channels of credit - The quality of insolvency and bankruptcy laws of a country have a bearing on the financial systems of a country. Where credit institutions and entrepreneurs can anticipate the outcome of an insolvency proceeding, more banks will be willing to lend, and more entrepreneurs will be willing to take on the risk and challenge of starting a new business. Interest rates, or the terms of providing credit by creditors in general, are a function of several factors. Isolating the impact of the Code would require research, possibly based on detailed data from banks and their experience with the processes under the Code. The efficacy parameters proposed to measure the objective are as follows:

- (a) Development of the market for interim finance.
- (b) Credit supply to and investment ratios in stressed sectors like real estate, construction, metals, etc.
- (c) Change in cost of capital, particularly for stressed sectors.

56. Indicative Methodology/Sources - Information from IPs may be sought for earlier and ongoing cases with respect to interim finance. Data can be sourced from CMIE and RBI databases to ascertain credit supply and investment ratios in stressed sectors and changes in the cost of capital.

57. Objective: Impact on the Financial and Economic Ecosystem- The efficacy parameters proposed to measure the objective are as follows:

- (a) Changes in the size of the corporate bond market in the country.
- (b) Change in Credit to GDP ratio.
- (c) Change in unemployment rates.

(d) Trends in private investment to GDP ratio.

58. **Indicative Methodology/Sources** - The above indicator on the size of the corporate bond market can be tracked by gathering corporate bond market data from stock exchanges and RBI. Data published by the RBI and government statistics are also useful sources to track changes in macro-economic indicators.

59. **Objective: Rescuing Employment and Income** - A simple approach to measure employment and income is to treat these like assets. The stakeholders that are affected first, upon initiation of CIRP, are the workmen and employees of the CD. While the waterfall mechanism under the Code prioritizes the dues of workmen and employees of the CD, thereby protecting their income to a certain degree, the future prospects of employment and income of these stakeholders need to be ascertained. To measure this, it is possible to track the well-being of all employees of affected companies beyond the conclusion of the CIRP by studying the following indicators:

- (a) Employment saved by the rescue of viable CD through the insolvency resolution process.
- (b) Track the well-being of all employees of affected companies beyond the conclusion of CIRP. Well-being implies whether employees retained their pre-CIRP commencement pay structures, post-retirement benefits, health insurance cover, etc.
- (c) Delays (number of days) in the release of dues to employees or workmen of the CD, pre and post-resolution.
- (d) There were detailed discussions on whether IBC had raised the risk-premium, and whether IBC had adequately empowered the small and medium sector enterprises to trigger CIRP, whose sources of debt are from money lenders and informal sources. This would be an important outcome to track.

60. **Indicative Methodology/Sources** - Data with respect to employment and income of workmen and employees of the CD can be obtained from IPs and IBBI. Further, questionnaire-based surveys of the affected employees can be undertaken to ascertain inconvenience, if any, caused by the initiation of CIRP against the CD and its effect on the financial and mental well-being of the employees.

61. **Objective: Behavioral changes in stakeholders** - One of the most important outcomes of the IBC is the behavioral change it is bringing about amongst the lenders and borrowers. For example, because of the fear of the inevitable consequences of IBC processes, there is considerable evidence that debtors are avoiding defaults. Many applications for initiation of CIRP are being withdrawn before admission, and at times, after admission, as the debtors pay up due to the fear of losing control of their companies. The behavioral changes among creditors are noticeable. There is a need to notice behavioral changes also in the intermediaries in the insolvency ecosystem in terms of whether 'rent seeking' is decreasing. There were detailed discussions in the WG, whether IBC is raising the risk-premium, as an outcome of the new regime. The following were suggested as questions, answers to which will help in identifying the behavioral changes amongst the stakeholders:

- (a) Do creditors demand a premium on the credit extended to entrepreneurs who had gone through an insolvency resolution process?
- (b) Do creditors trust the debtors?
- (c) Do creditors indulge in meritocratic lending?
- (d) Does the incentive structure of law proactively prevent insolvencies and bankruptcies?
- (e) Do debtors avoid invocation of CIRP under IBC due to fear of losing control on business?
- (f) Does IBC provide freedom to exit and voluntary liquidation?

62. Indicative Methodology/Sources-

- (a) Survey based collection of information on the above parameters.
- (b) Available data on withdrawal of CIRP under section 12A.
- (c) Available data on voluntary liquidation.
- (d) Generation of awareness about the provisions of the Code, to be determined by the number of workshops and awareness programmes conducted by the regulator and the number of participants in such workshops/programmes.
- (e) Analysis of the landmark judgments of the AA and Supreme Court under the Code may be conducted. The cases may be categorised based on the issues already addressed by the said judgments. The analysis of the judgments will be helpful in measuring the intended and unintended objectives of the Code.

VI. SUMMARISING

63. The consolidated framework suggested by the WG includes:

- (a) identification of quantitative and qualitative parameters;
- (b) institutional arrangement (s) for capturing the parameters;
- (c) manner of using the identified parameters as per the mandate given to the WG.

64. The Table below summarizes the layers of outcomes and possible indicators for tracking them as recommended by the WG. The suggested framework for capturing outcomes of IBC by the WG is for the markets and the stakeholders to use and develop further.

Layers of Outcome	Objectives	Indicators
Strength of insolvency ecosystem	To aid the processes in pursuit of objectives of the Code	<ul style="list-style-type: none"> - Strength of each of the elements of the ecosystem - Performance of each of these elements
Strength of insolvency processes	To aid stakeholders to pursue the objectives of the Code	<ul style="list-style-type: none"> - Use of the processes under the Code by creditors and debtors as compared to other available options - Efficiency of the processes in terms of cost-time-recovery framework
Strength of insolvency markets	To aid the insolvency processes to arrive at competitive market outcomes	<ul style="list-style-type: none"> - Availability of interim finance - Availability of competitive resolution plans - Cost and information efficiency of the markets
Impact on businesses	Enhance availability of credit, promote entrepreneurship, drive competition and innovation	<ul style="list-style-type: none"> - Impact on cost of capital - Change in the capital structure of companies - Impact on availability of credit - Entrepreneurship culture in the economy
Behavioural changes	Desired behaviour through incentives and disincentives	<ul style="list-style-type: none"> - Proactive / preventive resolutions - Resolutions in the shadow of or on account of the Code - Settlements during the resolution process - Meritocratic lending / cleaner lending
Overall impact	Improvement in corporate governance, resource allocation, and economic growth	<ul style="list-style-type: none"> - Employment saved because of resolution of distressed companies - Amount of recoveries by creditors being ploughed back into the credit cycle - Capacity utilisation and resource allocation - Impact on the economic growth of the country

65. The WG would like to emphasise the following considerations to meet its mandate:

- (a) **National Dashboard for Insolvency Data:** Reliable real-time data is essential to assess the performance of the insolvency process. IBBI has made commendable efforts in publishing quarterly data on the insolvency resolution process in detail. This includes data on insolvency filings, recovery amount and duration of the insolvency process across CDs for all creditors.

In terms of the next step, IBBI can also consider including quantitative data on cost indicators such as court/bankruptcy authority fees, RP's fees, asset storage and preservation costs etc in its quarterly updates in line with international best practices. Apart from these, gathering the exact cost of the insolvency procedure is challenging given fragmented sources. The WG recommends a survey-based method to estimate costs, like the World Bank's Ease of Doing Business' approach, based on responses from IPs for the time being.

(b) **Time, Cost and Recovery:** Data on time, cost and recovery rates will allow a reliable evaluation of the insolvency process with respect to parameters of 'Effectiveness' and 'Efficiency'.

(c) **Macro-Economic Indicators:** Apart from specific insolvency indicators as reported by the IBBI, it is also important to track the performance of related economic indicators to assess the performance of the insolvency process with respect to other objectives such as 'promoting entrepreneurship' or 'enhancing credit availability'. Such an assessment would measure the performance of the system with respect to the 'Efficacy' parameter. The WG recommends a range of indicators such as the number of new companies registered, credit supply to stressed sectors like real estate, construction, metals etc, change in the cost of capital (particularly for stressed sectors), the status of non-performing loans, employment trends, size of the corporate bond market and investment ratio for the related sectors.

(d) **Non-Quantifiable Outcomes:** The WG emphasises that it is imperative to measure and track both quantifiable and non-quantifiable outcomes of the Code. Non-quantifiable outcomes such as behavioural changes in the debtors and creditors, ushered in by the Code need to be corroborated by research and quantifiable proxy indicators. As the Code matures, other behavioural changes are likely to emerge, and it is desirable to acknowledge the interface between behavioural science and economic legislations.

(e) **Data Challenges:** The WG acknowledges that there are multiple challenges in data collation for the methodology indicated since these data banks are compiled by various sources. Cross-validation of data sourced from multiple data banks is a challenge in making credible assessments. In view of this, the WG recommends the design of a national dashboard of insolvency data by using the existing data sources to the extent possible along with specific insolvency indicators which the IBBI reports on a quarterly basis.

VII. ANNEXURE**Composition of Working Group on Tracking Outcomes under the Insolvency and Bankruptcy Code, 2016**

Sl. No.	Name and Position	Position in the Working Group
1	Mr. G. N. Bajpai, Former Chairman, SEBI	Chairperson
2	Mr. Mahesh Vyas, Managing Director and CEO, CMIE	Member
3	Dr. Subhashish Gangopadhyay, Research Director, IDF	Member
4	Dr. Dipankar Gupta, Former Professor, JNU	Member
5	Dr. Ajit Ranade, Chief Economist, Aditya Birla Group	Member
6	Ms. Roopa Purushothaman, Chief Economist, Tata Group	Member
7	Dr. Anuradha Guru, Executive Director, IBBI	Member Secretary

VIII. LIST OF ABBREVIATIONS

AA	Adjudicating Authority
BIFR	Board for Industrial and Financial Reconstruction
CD	Corporate Debtor
CIRP	Corporate Insolvency Resolution Process
CMIE	Centre for Monitoring Indian Economy
CoC	Committee of Creditors
DBR	World Bank's Ease of Doing Business Report
FC	Financial Creditor
IBBI	Insolvency and Bankruptcy Board of India
IBC/Code	Insolvency and Bankruptcy Code, 2016
IMF	International Monetary Fund
IP	Insolvency Professional
IPA	Insolvency Professional Agency
IPE	Insolvency Professional Entity
IU	Information Utility
MSME	Micro, Small and Medium Enterprise
NPA	Non-Performing Asset
OC	Operational Creditor
OECD	Organisation for Economic Cooperation and Development
RBI	Reserve Bank of India
RP	Resolution Professional
RV	Registered Valuer
RVO	Registered Valuer Organisation
WG	Working Group