# Rating Criteria for Security Receipts Backed by Non-Performing Assets

## Sector-Specific Rating Criteria

This criteria report updates and replaces the previous version, dated 10 December 2018.

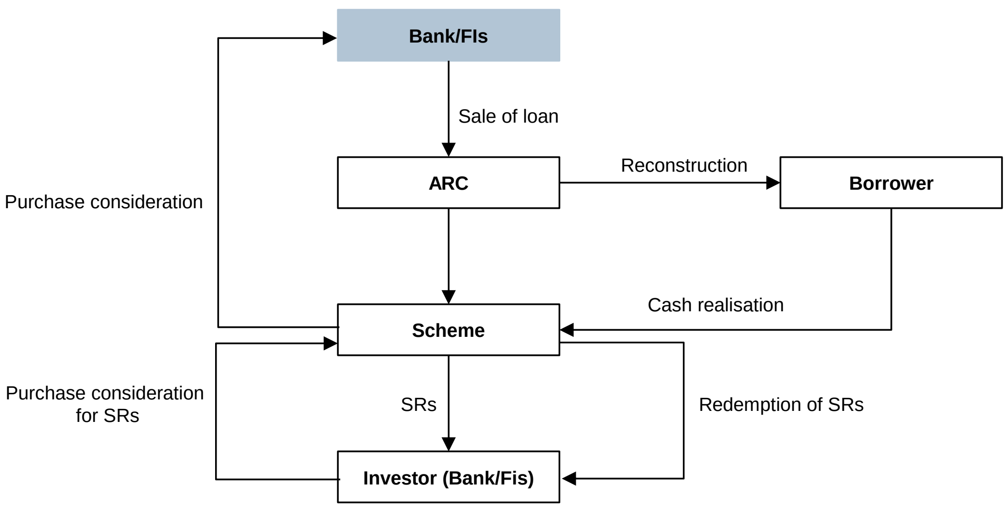
## Scope

**Rating of Security Receipts:** This criteria report describes India Ratings and Research's (Ind-Ra) methodology for rating security receipts (SRs) backed by non-performing assets (NPAs), e.g. retail loans, small business loans and large corporate loans. These ratings assess the recovery prospects for the SR investors and are assigned pursuant to the Reserve Bank of India's (RBI) guidelines.

**Description of SRs:** The SRs are five-year instruments issued by Asset Reconstruction Companies (ARC) to fund the acquisition of NPAs. The tenure of the SRs is allowed to be extended up to eight years with the approval of the Board of the ARCs. The criteria set out Ind-Ra's approach for rating SRs, which includes among other things an assessment of the amount and timing of potential cash flows from the underlying financial assets based on the asset resolution strategy pursued/expected to be pursued by the ARC. Within six months from the date of allotment, the ARC must finalise the resolution strategy that would be used to recover the dues from the borrowers.

Figure 1

**Structure Diagram**




Source: Transaction diagram, Ind-Ra

The ARCs usually consider a number of different routes to maximise the realisation from the assets, such as liquidation of collateral, the appointment of a special servicer, a settlement with the company to restructure the debt, and ensures payments from the operating cash flows of the company or fund infusions by the strategic or financial investors for the company.

The guidelines issued by the RBI refers to Recovery Ratings, where the recoveries are expressed in percentage terms, which can then be used to compute the NAV of the SRs. When rating SRs backed by NPAs, Ind-Ra's NR Ratings are consistent with the RBI guidelines, in that the recovery assessment is expressed as a percentage of the SR's face value.

### Related Research

RBI's Guidelines on the Declaration of Net Asset Value of Security Receipts Issued by Securitisation Company/Reconstruction Company

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**Application Limited to SRs:** The rating assigned to the SR is on the NPA Ratings (NR) scale and addresses the present value of expected recoveries, as a percentage of the outstanding face value of the SRs. This is not a credit rating being assigned to the SRs. The NR scale provides for recoveries on the face value of SRs which may also be more than 100%, since the purchase consideration paid to the selling bank for the NPA is, in most cases, less than the face value of the NPA acquired, it is possible for the estimated present value of the expected collections from the underlying NPA collateral to be greater than 100% of the SR face value.

**Ind-Ra's Rating Scale:** Ind-Ra issues NPA security receipt ratings (NR) on a scale of 'IND NR1' (highest) to 'IND NR6' (lowest) to denote the present value of expected collections from the NPA collateral underlying the SR, as a percentage of the SR face value.

## Non-Performing Asset Security Receipt Rating Scale

**IND NR1:** Very High — present value of the expected collections from the underlying collateral estimated at greater than 150% of the SR face value.

**IND NR2:** High — present value of the expected collections from the underlying collateral estimated at 100%-150% of the SR face value.

**IND NR3:** Good — present value of the expected collections from the underlying collateral estimated at 75%-100% of the SR face value.

**IND NR4:** Medium — present value of the expected collections from the underlying collateral estimated at 50%-75% of the SR face value.

**IND NR5:** Poor — present value of the expected collections from the underlying collateral estimated at 25%-50% of the SR face value.

**IND NR6:** Lowest — present value of the expected collections from the underlying collateral estimated at less than 25% of the SR face value.

## Key Highlights

The key risks that affect the ratings of the SRs are listed below.

**Recovery Amount:** The recovery amount is dependent on the specific resolution strategy put in place/likely to be pursued by the ARC and the underlying security value. ARCs follow different resolution strategies for recovery of dues, e.g. sale of security, settlement with borrower, improved servicing efforts to return the obligor back to performing status (to enhance recoveries in case of retail loans) and payment from the operating cash flows of the company. The differences between resolution strategies require a bespoke analysis based on the specific case; the table below maps the resolution strategy typically adopted for different loans.

Figure 2
### Resolution Strategy for NPL Assets

| | Loan-level servicing | Sale of security | Settlement with borrower | Payment from operating cash flows |
|---|---|---|---|---|
| Retail loans | √ | √ | √ | |
| Small and medium enterprise loans | | √ | √ | √ |
| Large corporate loans | | √ | √ | √ |

Source: Ind-Ra

**Recovery Timing:** The timing of recoveries is impacted by generic and specific factors. The most important generic factor that impacts the timing of recoveries is India's insolvency regime. The timing of recoveries is also dependent on specific factors such as the borrower's debt profile, the seniority of the debt underlying the SRs, the resolution strategy and the specific legal recourse chosen, e.g. application before the debt recovery tribunal, enforcement of security interest by the use of the SARFAESI Act, reference to National Company Law tribunal (NCLT) under Insolvency and Bankruptcy Code (IBC) and other provisions of law.

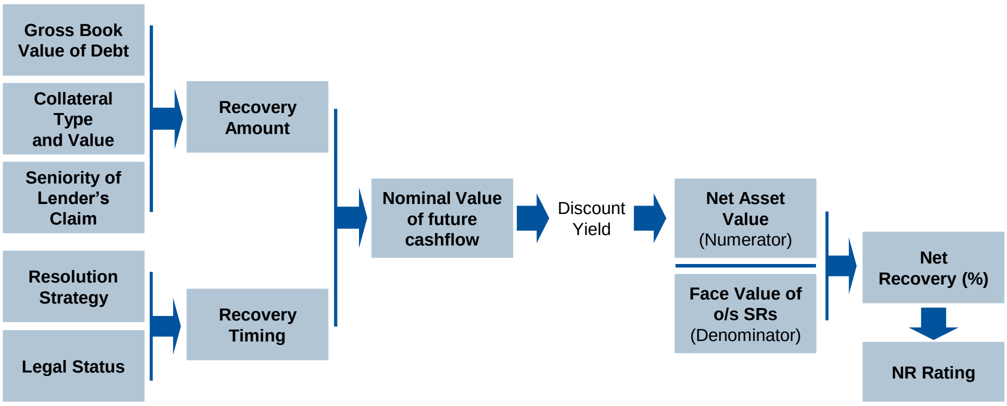
**Discount yield:** To calculate the net present value, Ind-Ra discounts the expected recovery with a yield to reflect the economic cost associated with the SR investments, which is generally higher than the indicative yield mentioned in transaction's offer document. The agency considers the higher cash flow uncertainty associated with the recovery from the distressed asset. The discount yield is applied on the nominal future cash flow from the underlying NPAs, calculated by Ind-Ra.

**Structural Analysis and Cash Flow Modelling:** While the two aspects above — The Recovery Amount and the Recovery timing — relate to the asset side, the rating of the SR is also dependent on the structure of the liabilities, which includes the transaction waterfall (including senior costs, e.g. trustee fee, the portfolio management fee and resolution cost) and different classes of SR issued and their respective indicative yields.

The SRs carry an indicative yield, which signifies the fact that redemptions are subject to recoveries, unlike other debt instruments where yield is fixed at transaction closing. The cash flow modelling considers the asset side analysis to assess the present value of the potential recoveries net of senior costs accruing to the SRs to determine the rating on the NR scale.

Figure 3

**Structural Diagram of NPA-SR assessment**




Source: Ind-Ra

**Servicing Ability and Incentives:** Ind-Ra considers the ability of the ARCs as the servicers in terms of the resolution plan for recovery of bad debt. Ind-Ra uses its knowledge of historical experience of similar recovery plans to assess the effectiveness of such servicers. The alignment of servicer incentives to that of investors is also an important consideration given the central role of the servicer in ensuring the success of the recovery plan.

The Indian regulatory regime addressed ARCs alignment factor by requiring the seller banks, from April 2018, to undertake provisioning for the NPAs sold to ARCs as if the asset remained on its own books, if their investment in SRs backed by these sold NPAs is more than 10% of the total SRs issued. This would require capital investment by the ARC in the SRs of any floated trust, resulting in the ownership of the trust passing on to the ARC and the bank exiting from the transaction after receipt of purchase consideration from the ARC.

## Data Adequacy

Ind-Ra relies on the ARC to provide full and accurate information on the progress made in resolution of each trust. Ind-Ra expects the ARC to share the pursued resolution plan and key transaction documents, e.g. the executed Deed of Assignment, Trust Deed and the Offer Document, in order to understand the details of the security, the net and gross book value of the NPLs being acquired, the transaction waterfall as well as the valuation reports of the underlying assets to understand their fair market value. In case of retail loans, Ind-Ra expects to receive the static pool recovery experience of the ARCs. Additionally, Ind-Ra expects to receive periodic updates from the ARCs on the progress of the resolution strategy adopted, including any changes to the resolution strategy, information on the amount of SRs outstanding, the total monies recovered, the allocation of such recoveries to the senior costs and toward redemption of the SRs.

The key information requirement is detailed in *Appendix 5* and is generic in nature. Given that resolution strategies can vary substantially, it is expected that Ind-Ra will receive additional information on a case-by-case basis in order to provide a rating for the instrument.

## Recovery Analysis

Ind-Ra will undertake the asset analysis considering the key sources for recovery of dues, as per the resolution strategy put in place by the ARC. For each of the resolution strategies — the key components of the recovery analysis (i.e. recovery amount and the recovery timing) are discussed in detail below.

### Asset Sale Strategy

In case of assets that are non-operating or partially operating, ARCs usually adopt the asset sale strategy, as they believe that business restructuring would likely be unsuccessful. Given this, Ind-Ra analyses the potential recovery amount based on the collateral information provided by the ARC. ARCs also provide information on legal status with respect to recovery process and the likely legal course to be pursued by the ARC which impacts the recovery timing.

In the event that the ARC has arrived at an out-of-court settlement with the borrower — where the borrower agrees to pay the agreed settlement amount in one or more instalments — Ind-Ra assesses the willingness (higher, if the value of the security is higher than the settlement amount) and ability (source of settlement amount) of the borrower to honour the settlement. An example is provided in *Appendix 2*.

### Recovery Amount

The gross recoveries are typically the minimum of the distressed sale value and the gross book value (defined below) of the assets underlying the loan. The key considerations that Ind-Ra applies to arrive at the distressed sale value are given below.

- **Gross Book Value (GBV):** The GBV of the debt is the total amount due to the lender. It includes both the principal and interest — original and penal. As the debt is assigned to the ARC, GBV represents the maximum entitlement of the ARC from the recovery proceeds. The GBV increases owing to interest accretion until recoveries occur from the sale of the collateral security.
- **Collateral Value:** Ind-Ra expects to receive detailed information on the relevant collateral, e.g. plant and machinery, land and building from the ARC. The key information is the valuation report for the collateral. Ind-Ra would adjust the valuation provided by the ARC to arrive at the distressed asset value. The distressed asset value is the asset value adjusted for factors such as the nature of the collateral, its location, market value declines (MVD) and distressed sale adjustments (see below).
    - **Type of Collateral:** The nature of the collateral may range from plant and machinery to land and building. The key factors considered in assessing the value of the collateral are given below.
        - **Plant and Machinery (P&M):** Depending on the industry, such collateral may be prone to obsolescence risk. Additionally, the value is further depleted if the plant is non-operational for a significant time period and could be adjusted significantly downward. In the event of inordinate delays in disposing off the P&M, the hair-cut could see gradual increase towards the higher side of the range to address increasing depreciation to the extent that minimal benefit may be given in cases, where such assets have little economic value.
        - **Land:** The key considerations are its location with respect to distance from economic hubs or residential hubs, as well as prospect of future economic growth in the region. The valuation report is expected to be current. In case of dated valuation reports, indexation would be used to incorporate any fall in property prices and to arrive at the current value. In its analysis, the agency segregates the property

location in four categories – Urban Class A, Urban Class B, Semi-urban and Rural/Interior and has defined additional haircuts for each category based on the expected market value decline analysis.

— **Building:** It is important to determine if a sale would allow a building to be used for its primary purpose. A sale where the primary purpose of a building does not change requires little adjustment to factor in future investments to make it usable. Such investments would be deducted by prospective buyers while bidding for the building.

— **Adjustment for Distressed Sale:** The collateral is sold or auctioned on an 'as-is-where-is' basis in case of fixed assets such as land and building which can see price appreciation compared to current assets such as plant and machinery. This means that the potential buyers would carry the risk of unstated or undiscovered liabilities as and when they arise and hence, such properties are valued at a substantial discount. In Ind-Ra's analysis, a suitable haircut is applied on cases with higher complexities or disputes to address the issue of distressed sale.

- **Amount and Seniority of Lender's Claim:** The investors in the SRs are entitled to the same rights as the original lender of the loan. The nature of the underlying loan is an important factor in recovery analysis, as described below.

  — **Seniority of Charge on Assets:** The type of charge — exclusive charge, first pari-passu charge or second equal pari-passu charge — decides the position of the investor in the realisations from the sale of the assets. An exclusive charge allows an ARC better negotiating power with the borrower, while a multiple creditor situation requires more inter-creditor agreement to determine the recovery strategy.

  — **Debt Aggregation:** ARCs typically aggregate debt from existing lenders. Higher the proportion of debt an ARC can aggregate, the better is its ability to enforce a resolution strategy and maximise the recovery. Additionally, higher aggregation of debt will help them enforce security interest under the SARFAESI Act or as required by the provisions of IBC. Under the provisions of the SARFAESI act, one or more secured creditors representing not less than 60% of the amount outstanding in respect of a secured asset can enforce their security interest by issuing a notice to the borrower to repay all their liabilities. Also, under the provisions of IBC, one or more secured creditors representing not less than 66% of the amount outstanding can approve a resolution plan at the committee of creditors constituted by the Resolution Professional and such a plan would be binding on the borrower as well as the other lenders of the borrower.

Ind-Ra's assessment of the potential recovery value would thus depend on seniority and extent of charge, as well as the ability to enforce security interest.

## Recovery Timing

Given the nature of SRs — wherein they are not promised any cash flows on a timely basis, but have recourse to cash flows as and when they arise — the analysis of recovery timing becomes important while assigning the NR Rating.

The recovery timing under the asset sale strategy is driven by the legal status of the case with respect to recovery procedures at each of the legal forums, e.g. Debt Recovery Tribunal, SARFAESI Act or IBC. Ind-Ra categorises the progress made with respect to the recovery procedures on a scale of '1-5', where 1 denotes substantial progress and 5 denotes limited progress. If substantial progress has been made, the time to recovery ranges from one to two years, while if limited progress has been made, it could range between three and four years.

## Special Servicing for Retail Assets

For retail NPAs, ARCs typically appoint a collection or servicing agent when they acquire non-performing retail assets. The retail assets could either be secured assets, such as home loans, loan against property, equipment loans, auto and commercial vehicle loans, or unsecured loans, e.g. personal loans or credit card receivables. Ind-Ra will analyse such assets using a statistical approach based on the vintage recovery static pool and the collection experience of the servicer. A recovery static pool is expected to have the following features to be useful for the recovery assessment of retail loan pools.

1. The static pools should track recoveries at a regular interval based on the principal outstanding of the loans in a specific delinquency bucket, as off a certain cut-off date.
2. The static pools should be representative of the collateral pools underlying the SRs. If the static pools are not representative of the pool being analysed, adjustments would be made for differences between them in respect of the key factors that drive recoveries.
3. The static pool should be segmented by the key pool characteristics of the asset class, e.g. delinquency bucket, borrower profile, loan-to-value (LTV) ratio, instalment-to-income ratio (IIR), loan tenure and interest rate.

The basic template for the static pool can be referenced in *Appendix 3* and the basic framework for assessment of the recoveries is also provided in the form of a flow chart in *Appendix 4*.

### Recovery Amount

The recovery amount estimates for retail loans will depend on the tenure of the loan vis-à-vis the tenure of the SRs. For auto and commercial vehicle loans — that have tenures broadly matching the five-year tenure of security receipts — recovery is estimated using the static pools for the relevant servicer/asset class. However, for some asset classes — such as mortgage loans, where the loan tenure extends beyond the tenure of the SRs — the recovery analysis would consist of two streams of cash flows: cash flow estimates, based on repayment and repossession of assets during the first few years, estimated using the static pool; and the terminal value of the pool, which is representative of the liquidation cash flows at the maturity of the SRs. The first part of the recovery analysis, as explained in point 1 below, is common to all retail loans, while the second part (point 2) is important for long-dated assets such as mortgages.

### 1. Base Lining of Recoveries and Pool-Level Adjustments

Ind-Ra will analyse the static pool information from the Servicer to arrive at the base case recovery amount estimates. Ind-Ra will make adjustments for differences in the economic environment should the static pools belong to a particularly benign economic period (which lead to better recoveries than possible at the time of the assessment of a transaction pool). Subsequently, Ind-Ra will make adjustments for differences in characteristics between the current pool and the static pools. These adjustments will be made for parameters such as LTV, IIR and others which in Ind-Ra's assessment are key drivers of recovery amount. In the absence of the static pool information, Ind-Ra uses the historical recovery performance of the matured Ind-Ra rated retail SR transactions of the same asset class to estimate the base case recovery amount and recovery timing of the subject transaction. All the adjustments are done at the pool level using the static pool information or historical recovery performance based on difference in recovery experience for loans of segments of LTV, IIR and tenure.

Ind-Ra has observed that deeper delinquency buckets show lower recoveries over the same period of time when compared to less delinquent buckets. Also, the amount of the loan that remains unpaid, as a percentage of the loan amount disbursed, is an important indicator of borrower behaviour. Loans that have a smaller amount unpaid could be indicative of financial distress leading to default, while loans where large amounts remain unpaid could result from less-than-adequate credit underwriting, leading to default. Such recoveries, as estimated from the static pool post the adjustments mentioned above, would be the base case for assets like auto and commercial vehicle loans. For mortgage loans, this would represent the first of the two recovery streams. The second source of recovery for mortgage loans is described in the following section.

2. Benefit of Security for Terminal Value Assessment

Certain asset classes such as mortgage loans could have remaining tenure longer than the tenure of the SRs. The resolution strategy of ARCs addresses this terminal value issue by proposing to assign such assets — before the end of the SR tenure — to third-party investors. This enables the redemption of the SRs within their tenure, or a liquidation sale of assets close to maturity for SRs for loans that remain delinquent. Ind-Ra analyses the terminal value of long-term assets in the following manner.

Ind-Ra does not include any terminal value analysis while rating SRs backed by auto and commercial vehicle loans for the following reasons:

- the historic static pool experience suggests that the time to recovery does not extend beyond the maturity of the SRs, which is five years to start with and extendable with the approval of the Board of the ARC so that the total period of realisation does not exceed eight years from the date of acquisition of the financial asset concerned;
- the static pool recoveries include recoveries on both accounts — from curing of loans to less delinquent buckets and also from repossession and sale of the underlying assets. If such a benefit is provided, it would amount to double counting the benefit given to recoveries; and
- assets such as auto and commercial vehicles are subject to depreciation, which makes assessment of collateral value analytically less important.

## Assessment of Portfolio Nearing SR Maturity (Terminal Value Analysis)

As per the resolution strategy, and as a result of special servicing efforts, loans acquired by an ARC will be categorised as follows:

### Loans in Deeper Delinquency Buckets Since Acquisition

Ind-Ra analyses the loan pool to evaluate the loans that would have a higher probability of continued non-payment (and thus of reaching deeper delinquency buckets immediately after assignment). Loans which have a very low borrower equity (willingness to pay) and high instalment-to-income (ability to pay) ratios would be more prone to non-payment. Recoveries from such loans would occur in the initial years of acquisition of the pool by the ARC, via liquidation and sale of assets. Such recoveries would be reflected in the static pool recoveries, which are provided by the servicer.

### Loans Current Since Acquisition

Loans that have high borrower equity and low instalment-to-income ratios would show good repayment ability relative to the other loans in the pool; as such, they would have a greater probability of curing and becoming current. Such borrowers pay according to their loan agreement until loan maturity, which would extend beyond the maturity of the SRs. Ind-Ra will assess the terminal value of such future cash flows beyond the maturity of the SRs by discounting the future cash flow of such loans at a much higher yield, reflective of the delinquent history of such loans.

### Loans Non-Current Close to SR Maturity

The loans remaining in the pool (after accounting for loans in the previous two groups) would be the those paying intermittently; they would remain non-current towards the maturity of the SRs. Ind-Ra would arrive at the terminal value of such loans by applying MVDs on the property values at the time of origination (see following section). The terminal value assessment would comprise of loans in the last two categories mentioned above.

## Market Value Declines

The MVD estimation consists of two components: the decline in property prices — based on the historical volatility of property prices — and a quick sale adjustment. Ind-Ra uses a number of public sources to estimate trends in property prices.

Given the paucity of available data, the MVD analysis is done by grouping cities under four tiers: Tier 1 (comprising metros) to Tier 4 (comprising small towns). The key steps in arriving at the MVD are given below.

1. The key input is the property price at loan origination, which is supplied in the form of original LTV and loan amount.
2. The historical trends of price volatility and annual returns would be used to arrive at the property value close to maturity of the SRs.
3. A further suitable hair-cut would be applied on the prices arrived at in step 2 to incorporate factors that could reduce property prices, e.g. illiquidity of such assets and the lowering of the price to create interest amongst potential buyers (quick sale adjustment).

## Partial Benefit to Terminal Value

ARCs have a resolution strategy which is based on liquidation of long-dated assets, based on their terminal value, in order to derive maximum recoveries within the tenure of the SRs. However, Ind-Ra only ascribes partial benefit to the terminal value arrived at for current and non-current loans, for the following reasons.

- There have been precedents in the past where ARCs have successfully assigned the underlying loans to third-party investors; this allowed an early redemption and exit to the SR investors before the maturity of the SRs. This has been seen in a few cases involving auto and commercial vehicle loans; however, it remains to be seen if mortgage loans also have investor interest which could lead to redemption of SRs.
- ARCs are allowed to invoke the provisions of the SARFAESI act to recover dues by sale of assets after giving notice to the borrower. But such an exercise on a large scale, involving thousands of loans within the tenure of the SRs, could be a logistical challenge.

## Recovery Timing

For retail assets where the servicer plays a central role in the recovery process, Ind-Ra will rely on the servicer's performance in accordance with the static pool when determining the time to recovery. In the event that different static pools suggest different trajectories of cumulative recovery, Ind-Ra will assume the lower of the gradient of recoveries between two periods. A conservative time to recovery estimate leads to a scenario where costs may build up, leading to lower redemptions of the SRs.

## Analysis of Operating Cash Flows

For operating companies, the resolution strategy may not be based on the sale of assets, but rather on the company's cash flows with certain key characteristics. These characteristics generally include a turnaround strategy which has the consent of the lenders — through a corporate debt restructuring plan — and may also involve fresh equity infusion through a financial/strategic investor.

## Recovery Amount

The recovery amount is based on an analysis of the net enterprise value of the company (after payment of mandatory dues and other senior claims). The enterprise value is computed by the discounted cash flow analysis across a number of scenarios. Given that these cases require corporate analysis of the company, structured finance analysts work in conjunction with Ind-Ra's corporate finance analysts to analyse all the risks pertinent to the company depending on the company's industry and business model.

Based on the past financials and inclusion of the new strategy, a base case is computed. Explicit forecasting for each line item and key financial metrics — such as revenues, margins, capex and net working capital cycles— is conducted for the foreseeable period during the tenor of SRs.

Ind-Ra's analysis includes different scenarios, such as economic shocks leading to depressed revenues and margins followed by recovery, and optimistic scenarios involving revenue growth and reduction in costs to compute the enterprise value of the company net of any statutory dues and workmen wages. The agency will consider the resolution plan of the ARC — which is based on the sharing ratio, ARC's priorities and any charge in the assets of the company — to allocate dues to the creditors.

### Recovery Timing

For resolution strategies based on driving recoveries from the cash flows of the company, most recoveries are back-ended (with a large part of the earnings expected in the later years). This is due to the fact that the company would require cash in the initial years to support the turnaround strategy.

## Structural Analysis and Cash Flow Modelling

The recoveries estimated, depending on the asset type and the resolution strategy, are applied to Ind-Ra's Cash Flow model, which simulates the structural aspects of the transaction, e.g. the senior costs and pay-outs to different classes of SRs and their indicative yields. It is important to mention that while Ind-Ra runs a number of scenarios in the cash flow model — e.g. different values of the recovery amount and timing of recoveries — such scenarios are not meant to simulate the rating-level stresses that Ind-Ra would employ for a credit rating.

The nominal value of future cash flow applied as per transaction characteristics are described below:

1. **Deduction of senior and mandatory claims on collections:** Senior claims on the collections are deducted from the estimated recovery amount at the estimated time of recovery. Expenses of the trust, portfolio management fees and fees to the recovery agent are then deducted to arrive at the realisable value available for the SR investors.
2. **Resolution timelines:** The main considerations for assessing time to recovery include the likely resolution strategy and the legal complexity of the case. Ind-Ra employs a series of cumulative collection vectors which are based on the legal process reaching different outcomes with different timelines. Another important factor when assessing a recovery timeline is the expertise of the ARC in debt resolution and its past performance for all exited cases for similar borrowers. This can be regarded as an indication of the ARC's servicing capabilities.
3. **Discounting expected cash flows:** The estimate of the realisable value available for SR investors (shown in step 1) is then discounted at a suitable yield for the estimated resolution timeline (shown in step 2); this results in the net present value (NPV) of the collections for the benefit of the SR investors.
4. Recovery amount percentage: The estimated NPV of collections that will go to the SR investors shown in step 3, divided by the outstanding face value of the SRs, will result in the recovery amount percentage. It should be noted that the rating of the SRs on the collection scale only considers the collection potential from assets available to the trust and the value of outstanding SRs at the time of the SR rating exercise.
5. **Collection matrix:** Steps 1 to 4 are repeated for different values of the recovery amount (under worst case and base case collection scenarios) and for different resolution timelines (A to C, see below). The result is a matrix of collection amount percentages for each collateral value and resolution timeline (as shown in the Collection Matrix for Asset Sale Strategy table below).

The ultimate realisation of the collateral value depends on the time to recovery which, in turn, is dependent on the estimates for the different paths of asset resolution. These different paths are captured by the resolution timelines A to C.

- **Timeline A:** Considers the legal status for assets from all borrowers and the probable time to resolution.
- **Timeline B:** Considers the possibility that all asset resolutions in timeline A are lagged by at least six to 12 months. This is to consider unforeseen delays in legal proceedings which would affect the amount of, and time to, recovery.
- **Timeline C:** Considers the possibility that assets may be resolved by one-time settlement, whereby the borrower settles the due in the form of a one-time payment or a structured payment schedule, either resulting in a bullet payment or gradual payment.

The collection amounts shown in the matrix are derived by applying the resolution timelines and mandatory expenses to each collateral value, as shown in the example Collection Matrix below. These collection amounts are the present value of the net cash flows to SR holders, discounted at the yield and expressed as a percentage of the SR face value. The base-case collection represents a current economic scenario, where partial benefit is given to the servicer's collection estimates, while the worst case represents a further reduction in the base case estimate due to other variables (e.g. negotiations between multiple creditors leading to lower recoveries or delay/diminution in payments by borrowers).

Figure 4

### Example: Collection Matrix for Asset Sale Strategy

| | Pessimistic scenario | Base scenario |
|---|---|---|
| Collateral value (%) | 74 | 105 |
| Collection amount (%) under resolution timelines (A, B, C) | | |
| A. Cumulative collection vector – probable time to resolution | 70 | 84 |
| B. Cumulative collection vector – moved by six months to two years | 65 | 78 |
| C. Cumulative collection vector – bullet collection | 60 | 75 |

Source: Ind-Ra

6. **Non-Performing Asset security receipt ratings (NR):** When assigning the NR, Ind-Ra will use its analytical judgement to select the collection amount percentage from the matrix above which most closely resembles the expected collections from the NPA collateral backing the SRs.

   The ratings reflect assumptions about relative recovery expectations from the non-performing financial assets based on the underlying security and the resolution strategy pursued. The scenario analysis above allows Ind-Ra to understand if any of the scenarios lie at the cusp of two rating categories. The final rating assigned is based on the majority of the values that lie within a rating category. Nonetheless, if qualitative aspects demand, the lower of the two ratings could be assigned to the SRs.

The methodology described in this criteria report forms the basis of the SR rating methodology. However, Ind-Ra recognises that certain non-performing asset structures may contain risk characteristics not contemplated in the framework. Therefore, Ind-Ra fully expects that this methodology will be supplemented by analytical judgment and deterministic overlays where unique risks are identified. Ind-Ra will review the rating methodology periodically to incorporate any material changes in the structural aspects of non-performing loan acquisition by ARCs, the issuance of SRs and the historical performance of ARCs in the resolution of small-borrower non-performing loans.

## Surveillance of the Assigned NR Ratings

Ind-Ra will assign ratings to the SRs within six months of the acquisition of the assets by the ARC or the finalisation of the resolution strategy, whichever is earlier. Thereafter, the rating will be reviewed at half-yearly intervals as per RBI guidelines, based on the information provided by the issuer.

Ind-Ra expects to receive the following information on a half-yearly basis as part of its performance analysis of the security receipts:

- update on the current legal status of all the assets in the trust to assess the time to recovery;
- details of any additional debt acquired by the ARC relating to the borrowers in the trust;
- collateral valuation reports;
- information on any SR amounts that have been redeemed and any assets that have been liquidated since the last rating review;
- loan-by-loan actual monthly recoveries and monthly delinquency bucket status for each account;
- updated financials of operating companies, including any modifications to the resolution plan; and
- cash held with the trust, to be applied to the transaction waterfall.

## Appendix 1: Key Terminologies

Figure 5
### Key Definitions

| | |
|---|---|
| **Small borrowers** | Borrowers, typically small companies with loan sizes of up to INR500 million. Many of these borrowers do not have the audited financial statements (profit and loss accounts and balance sheets) required for an enterprise value analysis. In most cases the ARCs looks to recover its dues by liquidation of collateral security of the underlying assets. |
| **Retail borrowers** | Delinquent loans to borrowers for financing auto, commercial vehicles, mortgages and also unsecured consumer and credit card loans. In these cases, the resolution strategy centres around improving the collection strategy; asset sales play a marginal role, except in case of mortgage loans. |
| **Large corporate borrowers** | Borrowers — typically large companies which have defaulted on their loans — which are operating and looking to repay the ARC using operating cash flows. |
| **NR scale** | Present value of the expected collections to SR holders from the underlying NPA collateral, expressed as a percentage of the SR face value. |
| **Non-performing assets** | An asset in respect of which interest and/or principal has remained overdue for three months or more. |

Source: Ind-Ra

## Appendix 2: Worked Example (Asset Sale as a Resolution Strategy)

Figure 6
### Worked Example

| | | |
|---|---|---|
| 1 | Company | XYZ Ltd. |
| 2 | Loan gross book value at time of acquisition | 80 |
| 3 | Loan interest rate (%) | 10 |
| 4 | Charge on collateral (%) | 50 |
| 5 | Collateral | Land |
| 6 | Market value of collateral | 170 |
| 7 | Location of property | Rural/interior |
| 8 | MVD (%) | 10 |
| 9 | Property value$_{\text{MVD Adjusted}}$ = [5] * [1-MVD] | 153 |
| 10 | Distress sale adjustment (%) | 20 |
| 11 | Property value$_{\text{Distress Sale}}$ = [8] * {1-[10]} | 122.4 |
| 12 | Legal status | Initial stages of DRT |
| 13 | Time to recovery in years | 4 |
| 14 | Loan gross book value at time of asset sale = [2] * (1+[3])^[13] | 117.13 |
| 15 | Senior claims | 20 |
| 16 | Amount left after meeting senior claims = [11] - [15] | 102.4 |
| 17 | Amount realisable by ARC = [16] * [4] | 51.2 |
| 18 | Amount actually recoverable by ARC of the GBV due = Min([14], [17]) | 51.20 |

Source: Ind-Ra

## Appendix 3: Static Pool Recovery Template for Retail Loans

(For Representation Purpose Only)

Figure 7

### Cumulative Recovery by Delinquency Bucket (Days Past Due)

| January 02 | | Year from start of servicing (cumulative recovery as % of principal) (%) | | | | |
|---|---|---|---|---|---|---|
| **Delinquency bucket (days)** | **Principal** | **1** | **2** | **3** | **4** | **5** |
| **90-120** | 146 | 35 | 45 | 55 | 65 | 76 |
| **120-150** | 80 | 30 | 40 | 50 | 60 | 68 |
| **150-180** | 65 | 25 | 30 | 40 | 55 | 65 |
| **180-210** | 44 | 20 | 25 | 35 | 45 | 61 |
| **210-240** | 35 | 15 | 20 | 30 | 40 | 55 |
| **240-270** | 23 | 10 | 25 | 35 | 40 | 48 |
| **270-300** | 38 | 8 | 15 | 25 | 35 | 45 |
| **300-330** | 56 | 5 | 10 | 15 | 25 | 35 |
| **330-360** | 41 | 5 | 7 | 12 | 18 | 25 |
| **360+** | 150 | 3 | 6 | 9 | 13 | 15 |

Source: Ind-Ra

Figure 8

### Cumulative Recovery by Loan to Value

| Recovery by LTV (%) | 90-120 | 120-150 | 150-180 | 270-300 | 300-330 | 330-360 | 360+ |
|---|---|---|---|---|---|---|---|
| **<=50** | 75 | 65 | 55 | 25 | 23 | 20 | 15 |
| **51-65** | 70 | 80 | 50 | 24 | 21 | 17 | 14 |
| **66-75** | 65 | 78 | 45 | 23 | 20 | 15 | 13 |
| **76-85** | 60 | 75 | 40 | 22 | 19 | 13 | 12 |
| **86-95** | 55 | 65 | 35 | 20 | 18 | 12 | 11 |
| **>95** | 50 | 70 | 30 | 18 | 17 | 11 | 10 |

Source: Ind-Ra

Figure 9

### Cumulative Recovery by Tenor

| Recovery by tenor (%) | 90-120 | 120-150 | 150-180 | 270-300 | 300-330 | 330-360 | 360+ |
|---|---|---|---|---|---|---|---|
| **<=24** | 87 | 96 | 74 | 79 | 32 | 31 | 40 |
| **25-36** | 76 | 78 | 57 | 46 | 53 | 45 | 31 |
| **37-48** | 76 | 64 | 90 | 48 | 55 | 69 | 28 |
| **>48** | 76 | 74 | 74 | 39 | 50 | 37 | 37 |

Source: Ind-Ra

Figure 10

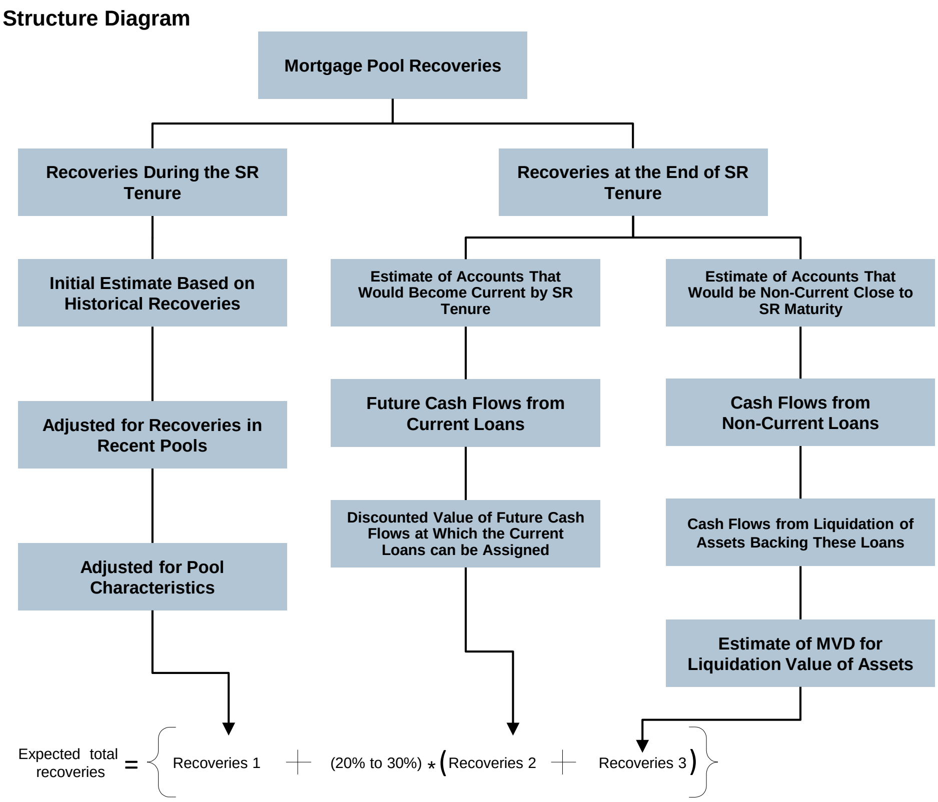
### Cumulative Recovery by Principal Unpaid at Time of Default

| Recovery by % principal unpaid (%) | 90-120 | 120-150 | 150-180 | 270-300 | 300-330 | 330-360 | 360+ |
|---|---|---|---|---|---|---|---|
| **0-20** | 86 | 88 | 83 | 64 | 61 | 76 | 45 |
| **20-40** | 90 | 85 | 82 | 63 | 58 | 74 | 42 |
| **40-60** | 86 | 84 | 83 | 50 | 54 | 42 | 44 |
| **60-80** | 85 | 77 | 76 | 43 | 55 | 47 | 42 |
| **80-100** | 65 | 70 | 57 | 31 | 44 | 40 | 30 |

Source: Ind-Ra

## Appendix 4: Algorithm for Retail Loan Recoveries

Figure 11
### Structural Diagram of NPA-SR assessment




Source: Ind-Ra

## Appendix 5: Generic Data Requirements

Figure 12
### Expected Data Fields

| Asset sale | Retail loans | Operating cash flows |
|---|---|---|
| Originator/seller | Originator/seller | Originator/seller |
| Servicer | Servicer | Servicer |
| Issuer | Issuer | Issuer |
| GBV of loan acquired | GBV of loan acquired | GBV of loan acquired |
| NBV of loan acquired | NBV of loan acquired | NBV of loan acquired |
| Trust creation date | Trust creation date | Trust creation date |
| Security receipts issued | Security receipts issued | Security receipts issued |
| Security receipts outstanding | Security receipts outstanding | Security receipts outstanding |
| Legal status update | Transaction documents | Legal status update |
| Senior claims to issuer | Static pool recovery information | Senior claims to issuer |
| Transaction documents | Loan-by-loan information on retail pool | Transaction documents |
| Particulars of collateral | Resolution strategy | Financial statements till last quarter |
| Collateral valuation report | | Resolution strategy |

Source: Ind-Ra