ICRA

ICRA Rating Feature

Rating Methodology for Securitisation Transactions

This rating methodology updates and supersedes ICRA's earlier methodology note on securitisation transactions, published in December 2016. While this revised version incorporates a few modifications, ICRA's overall approach to rating securitisation transactions remains broadly unchanged.

ICRA rated securitisation transactions are characterised by the (SO) symbol along with the rating for the instrument. An SO rating is specific to the rated issue, its terms, and its structure. SO ratings do not represent ICRA's opinion on the general credit quality of the issuers concerned.

Overview

This methodology note describes ICRA's framework for rating retail loan securitisation transactions (Asset-Backed Securitisation, ABS and Mortgage-Backed Securitisation, RMBS). Such transactions typically involve sale of a pool of loan receivables by a financier (termed as Originator) to a Special Purpose Vehicle (SPV, typically a trust) and issue of Pass Through Certificates (PTCs, which denote a beneficial right on the receivables) by the SPV to the investors. The methodology note also provides the framework adopted by ICRA in case of non-retail term loans

Securitisation is an important tool for fund raising for the issuers. It provides an additional source of funding for the issuers over the conventional routes. The lower cost of funding associated with securitisation also makes it an attractive offering for the issuer.

Typically, the underlying asset classes in Indian ABS transactions are loans for financing vehicles - private vehicles like cars and Two Wheelers (TWL) or Commercial Vehicles (CV) (like trucks and buses), construction equipment (CE) or for unsecured Personal Loans (PL)/ micro loans or small business loans. RMBS transactions typically comprise loans given for acquisition of residential property (Home loans, HL) or loans against existing residential or commercial property (Loan Against Property, LAP).

ICRA's credit ratings for securitisation transactions reflect—on a relative scale—the likelihood of the investor payouts being met as per the terms of the respective transactions. The ratings assigned by ICRA also factor in the estimate of the relative potential loss to the investor (taking into account credit enhancements, if any) over the tenure of the rated instrument.

ICRA's rating framework/ methodology for securitisation transactions involves analysis of the following key risks:

1. Legal Risk Analysis

a. ICRA's focus on legal risk analysis involves ascertaining whether the assets are eligible for assignment i.e. the assets have not been restructured or rescheduled or already securitised. Legal risk analysis also involves determining the true sale nature of the assignment and the bankruptcy remoteness of the SPV

b. ICRA reviews the legal opinion given by the transaction legal counsel, which forms the base of the legal risk analysis to see whether all issues have been addressed

2. Collateral Risk Analysis

a. Outlook on the operating environment for the relevant asset class

b. Qualitative and quantitative analysis of the Originator's portfolio

c. Analysis of composition of the selected pool

3. Structure Risk Analysis

a. Modelling the projected pool cashflows and investor payouts under various scenarios, given the specific transaction structure

4. Counterparty Risk Analysis

a. Securitisation transactions involve several counterparties such as servicer, trustee, and provider of cash collateral and liquidity facility

Each of the above areas is discussed in detail in the following sections.

1. Legal Risk Analysis

Securitisation involves the sale of assets from the originator to the SPV which in turn issues PTCs backed by these assets. The validity of this sale from a legal stand point is an important risk to be considered. On certain issues, ICRA relies on the legal opinion provided by the transaction counsel.

The most crucial issue that the legal opinion is expected to cover is:

- Whether the assignment of receivables constitutes a true sale of receivables from the Originator/Seller to the SPV

There is no securitisation law governing true sale in India, nor has the concept been tested in Indian courts so far. The RBI Guidelines published in February 2006, however, lay certain criteria that govern "true sale" of assets to a Special Purpose Vehicle (SPV). An SPV is established as part of the securitisation process and the assets are transferred to the SPV.

Some of the key criteria that govern true sale include –

- Following the sale of assets, there should be an immediate legal separation of the assets from the originator
- The originator should transfer substantial risks/rewards and rights/obligations under the assets after the sale to the SPV[1].
- Following the sale, the SPV shall not have any recourse on the originator and the originator shall not have any obligation to re-purchase any of the assets of the SPV.

The SPV is referred to as "bankruptcy-remote", implying that upon bankruptcy of the originator, the assets transferred to the SPV cannot be made available to satisfy any claims of the originator's creditors (since there has been a true sale). ICRA relies on the legal opinion to cover these pertinent issues relating to true sale.

The other typical issues that ICRA focuses on are –

- Whether the Assignment Documents have been executed in accordance with the prevailing stamp duty and registration laws
- Whether the assignment of receivables is valid as per the terms of the underlying loan agreements i.e. the loan agreement should not have imposed any restrictions on the assignment of receivables
- All the documents of the transaction constitute legal, binding and enforceable obligations of all the counterparties concerned.
- The transaction is not in contravention of any prevailing Indian law. Ideally it should highlight that it is specifically compliant with the RBI's "Guidelines on Securitisation of Standard Assets", dated

[1] Originator's entitlement to surplus income from securitized assets at the end of the pool's life is permitted

February 1, 2006 and the subsequent guidelines of May 2012 or August 2012 (depending on the kind of the originating entity)[2].

ICRA assigns a 'Provisional' rating to securitisation transactions to denote that the rating is contingent upon the completion of certain actions or the execution of certain documentation. The ratings are converted from 'Provisional' to 'Final' after a review of the transaction documents to determine whether the key structural features of the transaction, as envisaged in the draft documents, are getting accurately incorporated in the final documents. For more details, please refer to ICRA's Policy on assigning provisional ratings available at www.icra.in.

2. Collateral Risk Analysis

The collections from the underlying pool are the primary source of investor payouts. However, there may be some instances of delays or defaults in the pool or there may be prepayments leading to advance collections, all of which hinders the scheduled payout to the investor. ICRA's objective is to estimate the extent of delays/ losses and prepayments possible in the pool, so as to be able to assess the adequacy of the credit enhancement required to ensure timely payout to the investor, for a specified rating level. It is pertinent to note that the selected ***pool*** of loan receivables is a sample extracted from the larger ***portfolio*** of assets of the Originator. Thus, the first step is to estimate the likely eventual performance of the portfolio of loans. For this, ICRA analyses the Originator's lending policy, collection practices, systems and processes, the past performance of the Originator's overall portfolio and performance of the past pools securitised by the Originator. Superimposed on the above is the impact of the features of the selected pool to arrive at the estimated performance of the pool being securitised.

It is important to explain what ICRA means by 'Default' in the context of retail loans. Many of the borrowers may miss the payment due date. However, some of the delays get corrected soon, some get corrected with a lag and some do not get corrected at all, thus leading to a default on the underlying loan. ICRA categorizes borrowers who have missed their payments into 'soft' and 'hard' delinquency buckets. Soft delinquency bucket is defined as that from which recovery is more likely to happen, while a hard delinquency is defined as that from which recovery is difficult. This classification of delinquencies depends on ICRA's past observation for the asset class. For example, a hard bucket delinquency for an unsecured personal loan or micro loan is observed to be shorter (around 30-60 days) while that for a Commercial Vehicle loan is observed to be longer (around 180 days). Cases where the loan has been written off or if the underlying asset has been repossessed and sold at a loss constitute instances of 'crystallised loss'. Therefore, the ICRA's assumption of losses from contracts in the soft delinquency bucket is lower vis-à-vis the harder delinquency bucket.

A. Portfolio Analysis

A portfolio analysis reveals the performance of the loans based on certain metrics such as collection efficiency, delinquency build up, prepayment rates, loss on account of repossessed contracts and so on. The fundamental objective is to assess the overall credit quality of the portfolio and drivers of credit quality. In the portfolio of different originators and also across different asset classes, the key drivers of credit quality can be different. In ICRA's opinion the drivers of credit quality could be related to geography, asset and sub asset classes (if any), various borrower categories, product type and such other factors.

i. Qualitative Review

A qualitative review entails a detailed review of the Originator's business. Such a review becomes even more important when the asset class or the Originator has a limited track record. ICRA evaluates the Originator's business philosophy, credit policy, origination process, collection and recovery mechanism, IT systems, risk control and audit procedures. These factors are explained below.

[2] RBI released additional securitisation guidelines in May 2012 and August 2012 for banks and NBFCs respectively, laying down various requirements like Minimum Holding Period (MHP) criteria and Minimum Retention Requirement (MRR) criteria. It also lays down the kind of assets or nature of structures that are not permitted for securitisation.

Corporate Overview and Business Philosophy –The starting point for the Originator review is typically the study/ analysis of the company background and its organization structure. For Originators not already rated by ICRA, an all-encompassing analysis is performed, including financial and operational, to arrive at an internal shadow rating view on the entity. This is relevant given that in India, the Originators also typically function as the Servicer in the transaction. The originator's track record, experience of top management, target customer profile, business volumes targeted and risk appetite are some other important variables considered in the assessment. Broadly, Originators may follow a relationship based model (all functions decentralized and being handled at the branch level; most processes carried out in-house; clear focus on building relationship with the borrowers and greater tolerance for delinquency build-up) or a function-based model of lending (clear segregation of credit, sales and collection verticals; centralized decisions; several functions outsourced to vendors and generally lower tolerance for delinquency build-up) or a blend of the two models. While one is not necessarily better than the other, the checks and balances put in place by the company in either case are important.

Credit Policy – A well-documented credit policy conveys the risk appetite of the company and provides details of the various loan products offered to the borrowers. It lays down the loan eligibility criteria for any borrower and the credit norms being followed by the company for sanctioning the loans. The policy also lists down any deviations from these norms that might be permitted under certain situations and the corresponding approval process. The policy must be updated frequently to reflect the changing market dynamics. ICRA validates adherence to the policy by visiting a branch and carrying out random sample file checks for disbursed cases.

Origination Process – Detailed discussions with senior executives from Business, Credit and Risk divisions of the company are held to understand its sourcing and underwriting process. The originator's appraisal mechanisms including documentation checks, internal and external de dupes, bureau checks, field verifications, personal discussions, legal and technical checks (for mortgage loans) along with the strength and experience of the underwriting team determine the overall asset quality of the loan portfolio. The channel partners (DSAs/Dealers) of the Originator and their importance in meeting the overall sourcing needs is also an important driver of credit risk. The approval/ decline rates, historical application volume, processing time and presence of requisite monitoring and controls are some of the measures that are used to determine the efficiency of the origination process.

Table 1: Role of Credit Bureaus in India

There are 4 credit bureaus in India, namely Credit Information Bureau (India) Limited (CIBIL), Equifax, Highmark and Experian.
Various banks and FIs in India are its members and share the details of their borrowers with these credit bureaus and in return get access to the credit history of borrowers. Many borrowers are aware that their repayment track record is maintained at the credit bureaus and default in any earlier loan would reduce their chances of getting a new loan from any other lending institute. Fear of being rejected for future loans is one motivation for customers to pay on a timely basis. Issuers that are active in the Indian structured finance market obtain a track record of borrowers from these credit bureaus prior to lending.
Highmark and Equifax were set up to cater primarily to NBFC MFIs but have been catering to other NBFCs as well.

Operations, Collections and Recovery – Once a loan is disbursed, it needs to be adequately serviced by the borrower. The operations team must ensure that all post disbursement documents are collected. Post Dated Cheques (PDCs) must be stored, retrieved and then banked in a timely manner. The collection team must be geared to control delinquencies at an early stage and should become operational as soon as a cheque is dishonoured or cash collection or through ECS or any other mechanism is not received. Recovery process for loans under different delinquency buckets is assessed. The company's ability to repossess and sell assets, and recover dues from the highly delinquent loans is also analysed. In ICRA's view, a highly skilled and recovery and collection team (including the legal team) along with a stringent repossession policy can help keep the delinquency levels under control and curtail losses to a large extent.

IT Systems – The originator should have strong systems in place to identify, measure and control credit risk efficiently. IT systems should facilitate smooth storage, retrieval and flow of data within the organisation. All the data pertaining to disbursement and collections should be adequately captured. In addition to this, the ability to report data separately for securitised contracts on an ongoing basis is critical. The adequacy and timeliness of performance reports of past ICRA rated pools, if any is also taken into account while assigning the rating for the new transaction.

Risk Control and Audit - ICRA tries to understand the strength and scope of various internal and external audits that the originator is subject to and how frequently these are carried out. Many originators have a separate Risk Control Unit (RCU) or internal audit team which samples and screens the various files before disbursal and is responsible for minimizing cases of fraud. In some cases, this function is outsourced to external agencies. In cases where external agencies are employed, ICRA analyses the company's process of selecting and monitoring the external vendors.

ii. Quantitative Review- Measuring Asset Quality

There are several parameters—often used in conjunction with one another—for measuring past portfolio performance. The more common among these being -

Collection Efficiency, which may be measured as -

Current Collection Efficiency = Ratio of collections in a particular month to billings in that month.

Arrears Collection Efficiency = Ratio of collections of overdue amounts in a given month to opening overdues in that month.

A company that adopts a more stringent write-off policy generally shows a better collection efficiency ratio as compared to other companies that may be writing off less frequently. This is because a delinquent contract once written-off is not included in the billing amount going forward. ICRA adequately factors this in while analysing the collection efficiency.

Dynamic portfolio delinquency analysis

Ageing Analysis - Ageing analysis involves 'bucketing' or splitting a portfolio of loans according to their overdue status. To illustrate, let us assume that the value of a portfolio is Rs. 2000 crore as on December 31, 2018. Now, assume that of the Rs. 2000 crore, Rs. 1800 crore worth of loans are current (i.e. there are no overdues) and the rest of the loans are distributed in various delinquency buckets as shown in the table below:

Table 2: Ageing analysis of Rs. 2000 crore portfolio as on December 31, 2018

ays Past due	CURRENT	1-30	31-60	61-90	91-180	180+	TOTAL
Value of loans (Rs. crore)	1800	100	20	20	30	30	2000
Percentage of loans	90%	5%	1%	1%	1.5%	1.5%	100%

Such delinquency analysis can be carried out across various pools or originators and is a good benchmark for comparative pool performance

Coincidental Delinquency Analysis - The analysis in the table above is referred to as coincidental delinquency analysis. A common issue with coincidental delinquency is that it is affected by growth in the portfolio size. The loans in the various delinquency buckets might have been originated at various points in time. However, these expressed as a percentage of current portfolio size, gives a lower delinquency ratio as the portfolio may have grown quickly in recent times and delinquencies typically manifest with a lag. Nevertheless, this gives a quick perspective of the delinquency trend.

Lagged Delinquency Analysis - A loan that is delinquent for 90 days would have been originated at least 90 days in the past. 'Lagged delinquency analysis' involves calculating the delinquency ratio by dividing all loans delinquent by 90 days or more, by the size of the portfolio three months back. Similar analysis is done for other delinquency buckets. Lagged delinquency analysis gives a better measure of delinquency in a portfolio. Taking the current portfolio (as is used for calculating coincidental delinquency) may give a more

stringent (if the portfolio has shrunk in the last 90 days) or subdued (if portfolio has expanded in the last 90 days) view of the delinquency. This is illustrated in the table below:

Table 3: Dynamic Ageing Analysis

Month	Portfolio (Rs. crore[3])	Coincidental Delinquency				Lagged Delinquency		
		Current	30+ dpd	90+ dpd	180+ dpd	30+ dpd (1 month lag)	90+ dpd (3 month lag)	180+ dpd (6 month lag)
Jun-18	1200	94.0%	3.3%	2.1%	1.0%			
Jul-18	1320	93.8%	3.6%	2.3%	1.1%	4.0%		
Aug-18	1500	93.5%	3.9%	2.4%	1.2%	4.4%		
Sep-18	1680	93.2%	4.0%	2.5%	1.3%	4.5%	3.5%	
Oct-18	1850	92.5%	4.4%	2.6%	1.3%	4.8%	3.6%	
Nov-18	1930	92.0%	4.7%	2.8%	1.4%	4.9%	3.6%	
Dec-18	2000	90.0%	5.0%	3.0%	1.5%	5.2%	3.6%	2.5%
Jan-19	2300	88.0%	5.2%	3.3%	1.9%	6.0%	4.1%	3.3%

This analysis provides an overview of the portfolio quality. However, in case the Originator writes off the delinquent contracts the delinquency ratio will be lower as discussed earlier.

Roll Rate Analysis - Roll Rate Analysis is a useful metric for assessing the rate of forward and backward flow from a bucket, i.e., the portion of contracts that 'flow forward' into the higher delinquency bucket or 'flow backward' into a lower delinquency bucket. This analysis is more important at the time of the rating surveillance exercise, since it gives an understanding of how slippage and recovery have been occurring in a pool after it has seasoned for some months. This when compared to roll rate analysis of other past pools, all with similar asset class and seasoning attributes, gives an understanding of the performance of the current pool vis-à-vis the past pools and helps in forming an expectation of the future pool performance.

Prepayment Rate Analysis- Some contracts in a pool may get prepaid. In a "par" transaction where the loans are assigned to the trust at book value, prepayments result in compression of the excess interest spread (EIS) available in the structure especially if the higher yielding loans are repaid earlier than scheduled. In that case, the higher pool yield vis-à-vis the yield to investors would no longer be available as credit enhancement in respect of the foreclosed contracts. In a "premium" transaction where the loans are assigned to the trust at a premium, upon premature termination of contracts, the discounted value of the scheduled future cash flows (discounted at the investor yield) on the foreclosed contracts is paid out to the investors and their future cash flow is revised downwards accordingly. Currently, 'par' structures are more prevalent in the Indian securitisation market

Since the PTC yield is generally lower than the yield or interest rate on the foreclosed contracts, the amount collected falls short of the amount to be paid out to the investors. This shortfall then needs to be met out of the credit enhancement – typically the EIS. Thus, prepayments affect the level of credit enhancement and hence, it is important to analyse the prepayment rate for the originator's portfolio and the specific pool. The impact of prepayment is observed to be higher in the case of pools backed by home loans or loans against property that typically see higher prepayment rates.

[3] *100 Lakh = 1 crore = 10 million*

B. Static Pool Analysis

Static Pool Analysis (SPA) involves assessing the performance of a group of loan contracts originated during a defined period (say a month or a quarter). This group is called a static pool, and its performance is measured over its entire lifecycle i.e. from origination until the maturity of the contracts in the group. SPA reveals how delinquencies, losses and prepayments build up over time. The analysis reveals trends in asset quality and helps estimate future credit losses on the current portfolio.

For a SPA analysis, ICRA takes the contracts disbursed during various periods and notes their performance until maturity. For instance, in the case of contracts overdue for more than 90 days (90+ dpd), ICRA measures the performance by calculating the following ratio = [(Unbilled POS[4] + Principal arrears in respect of 90+ dpd contracts) + (Cumulative Loss Booked)]/ [Original loan disbursal amount during the period of origination]. This is computed at every month or quarter after the contracts during the period were originated.

The ratio discussed above incorporates losses along with delinquency above 90 days. This is because in some retail loans, contracts may be delinquent for a long period of time (serious delinquency bucket with very little or no scope of recovery) but repossession or sale of repossessed underlying assets may not have happened on account of several reasons. If these contracts are excluded from the loss calculations, the overall loss appears lower than what it should be. Hence contracts delinquent beyond a certain period of time are also incorporated in such a static pool analysis. This helps get a more realistic picture of possible eventual loss. The definition of serious delinquency bucket varies across asset classes.

Many companies have a write-off policy i.e. they write off contracts after they have been overdue for a certain period of time, say 90 days, 180 days and so on. Most companies also repossess the underlying assets if the loan has not been paying for a certain period of time. The repossession policy is Originator-specific and also depends on the nature of the underlying asset and the time the legal proceedings take before an asset can be repossessed. The Originator could then either release the repossessed asset—once the overdues are cleared—or sell the repossessed asset and recover the claims outstanding. The trend in recovery post sale of repossessed assets is also factored by ICRA in its collateral analysis. Recovery is a function of several factors such as geography, age of the asset, used asset prices, timeliness of repossession of the asset owing to legal proceedings and the time it takes to sell the asset. The longer it takes to repossess or sell an asset such as a commercial vehicle, the greater the depreciation and hence lower the recovery. ICRA analyses the write-off and repossession policies of all the originators and factors that into its analysis.

Using the method given above, a SPA table can be constructed as given below:

Table 4: SPA analysis at Loss cum 90+ dpd level

	Months post origination										
In %	**3**	**6**	**9**	**12**	**15**	**18**	**21**	**24**	**27**	**30**	**33**
Quarter 1	0.10	0.20	0.40	0.65	0.95	1.00	0.95	0.90	0.75	0.55	0.45
Quarter 2	0.15	0.25	0.45	0.75	1.00	1.05	1.00	0.95	0.80	0.60	*0.49*
Quarter 3	0.05	0.15	0.35	0.60	0.90	0.95	0.90	0.85	0.70	*0.52*	*0.42*
Quarter 4	0.25	0.35	0.55	0.80	1.10	1.15	1.10	1.05	*0.87*	*0.65*	*0.53*
Quarter 5	0.30	0.40	0.60	0.85	1.15	1.20	1.15	*1.09*	*0.91*	*0.67*	*0.55*
Quarter 6	0.05	0.15	0.35	0.60	0.90	0.95	*0.91*	*0.86*	*0.72*	*0.53*	*0.43*
Quarter 7	0.15	0.25	0.45	0.70	1.00	*1.05*	*1.00*	*0.95*	*0.79*	*0.59*	*0.48*
Quarter 8	0.30	0.40	0.60	0.85	*1.22*	*1.28*	*1.22*	*1.16*	*0.97*	*0.72*	*0.59*
Quarter 9	0.10	0.20	0.40	*0.62*	*0.89*	*0.94*	*0.89*	*0.85*	*0.71*	*0.52*	*0.43*

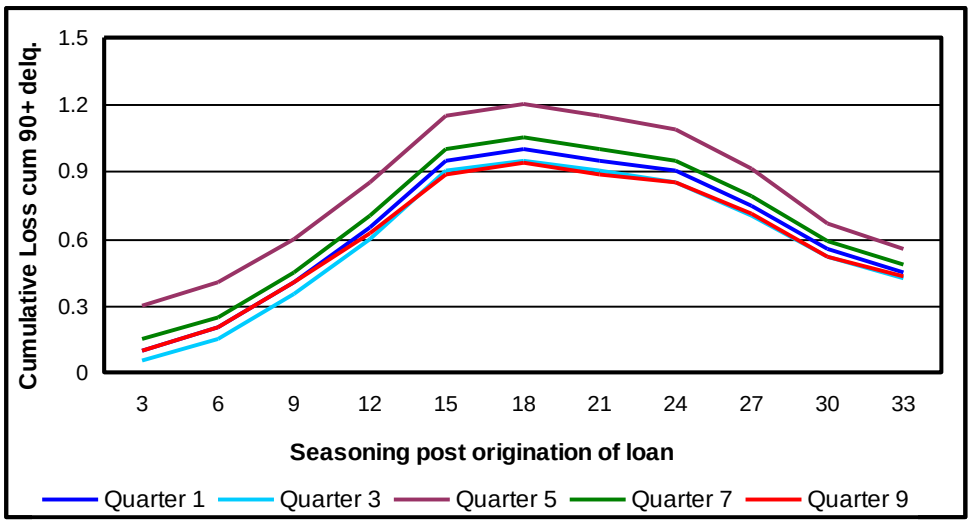
Source: ICRA

We can see that the pool of contracts originated in Quarter 1 has completed its full tenure and the eventual loss for this pool of contracts is 0.45%. On the other hand, the contracts originated in Quarter 9 have completed only 9 months of seasoning and the loss cum 90+ dpd is 0.40% (nine months after origination). By calculating the average increase in loss cum delinquency rates, these numbers can be extrapolated for

[4] POS: Principal Outstanding

the incomplete vintages to get an estimate of the expected loss cum delinquency rates. The extrapolated numbers are shown in Italics in the table above. Thus, SPA helps assess the quality of unseasoned pools by evaluating the overdue percentage of the older pools at the same or comparable seasoning points. From the above table, the extrapolated loss curves can be drawn as shown in the chart below. For illustrative purposes, we have drawn the curves only for certain quarters of loan origination.

Figure 1: Extrapolated Static loss cum 90+ delinquency curve



Source: ICRA

The adequacy of the credit enhancement level for a structured finance rating is assessed based on the delinquencies and credit losses expected from the pool being securitised. The analysis of the static pool data provides the mean static losses on past pools as well as variations in past static pool losses over time. This information about mean losses and loss volatility is useful in forecasting eventual losses for the partly seasoned pools.

This analysis can be done to measure the portfolio performance based on various parameters like asset class (most frequently used), geography, Loan to Value (LTV) ratio and so on. Importantly, the measurement of performance focuses only on the cash collections, and the analysis is immune to variations in the accounting policy.

Comparison of Static Pool Analysis and Dynamic Portfolio Analysis

SPA and Dynamic Analysis both have their merits and shortcomings - the primary differences between the two methods are brought out in the table below.

Table 5: Comparison between Static Pool Analysis and Dynamic Portfolio Analysis

Parameter	Static Pool Analysis	Dynamic Portfolio Analysis
Impact of change in portfolio size	No (denominator is constant since number of contracts being used for analysis remains the same)	Yes (with time, more contracts keep getting included or dropped from the analysis as a result of which the ratios at various points in time are not comparable)
Impact of variation in accounting policy of originators (different write off policies being adopted by originators)	No (not affected by write off policy of the originator) – information provided should be gross of any write-offs. However, write-off amounts can be added back to net numbers	Yes (higher the amount of write offs of a particular originator, the better the portfolio performance will appear). This however, can be adjusted for the amount of write-offs done

Parameter	Static Pool Analysis	Dynamic Portfolio Analysis
Estimation of future losses	Past trends can be extrapolated to estimate mean level and variance of potential future losses	Indicates only the broad trend in the portfolio
Ease of use	This is a more in-depth analysis. Granular data is required for this analysis, which may not be easily available with the issuers.	This is a quick measure of portfolio quality. Data is usually easily available in the format needed for this analysis.

Overall, Static Pool Analysis is especially useful in the context of rating retail loan pools given that the pool getting rated is also a static pool.

Deriving the base case loss

As discussed earlier, ICRA uses Static Pool Analysis to estimate the loss curves for a specific originator's portfolio. ICRA observes the loss rate over the life of the contracts originated in a particular vintage. This analysis is done for each asset class separately[5]. SPA can be used to extrapolate expected losses from less seasoned pools based on the loss curves of more seasoned pools. The greater the number of years of historical data available, the more comfortable ICRA is in using such data for projecting losses. Longer time periods of historical data allow ICRA to observe trends effectively and observe the performance over economic cycles.

The base case loss is derived from the extrapolated SPA (i.e. the average of loss seen at the end of each vintage in the SPA). However, since the base case loss is based on past vintages, some adjustments need to be made to incorporate expectations for the future. So, the base case loss is adjusted appropriately to reflect expected economic stress and ICRA's outlook on the asset class. Adjustments are also made for some qualitative factors such as any change in the originator's business model, credit policy, management, internal processes and so on.

Losses in retail loan pools typically follow a lognormal distribution. This distribution has a fat tail (i.e. more incidences of high loss scenarios and therefore more conservative) compared to normal distribution. ICRA also estimates the variability of losses, which is used in the cashflow model. The standard deviation used is derived from the standard deviation observed in the static pool analysis; this may also be adjusted for any recent portfolio developments that is likely to increase or reduce the variability in the pool - change in industry dynamics, geographical and borrower-wise diversity of the pool are key considerations for modifications in the standard deviation. Additionally, if the past data for SPA is available for a short period of time (due to short track record of the company for instance), the standard deviation derived from the SPA may not be fully reliable, hence the performance of industry peers is also considered to arrive at the standard deviation for such companies.

Since the pool is a part of the overall portfolio, a comparison of the pool characteristics with the overall portfolio characteristics gives an estimate of the expected pool performance. Hence some adjustments need to be made to the base case loss to arrive at the final loss assumed for the pool. The comparison is done on all the key parameters discussed earlier such as asset category, LTV, geography, tenure, debt burden ratio and so on. Given a particular parameter, ICRA looks at the performance of a sub-category and the share of that sub-category in the pool. Appropriate adjustments are made for the share of a better performing sub-category or for the presence of a weaker performing sub-category in the pool when compared to the portfolio. The derivation of the final loss rate for the pool has been discussed subsequently in this note.

[5] What constitutes a separate asset class is decided based on the materiality. For instance, if a particular portfolio of CV loans has a significant share of both used as well as new CVs, each of the two segments would be analysed separately. On the other hand, if the portfolio is comprised pre-dominantly of one of the two segments, a combined analysis may suffice. Availability of segregated data influences the kind of analysis done.

Analysis of some key parameters of the portfolio

In the previous sections, we have discussed our analysis of the broad portfolio performance. A further drill-down analysis is done to assess which factors largely influence the credit quality of a particular portfolio. The objective is to isolate sub-sections of the portfolio which are prone to higher losses or delinquencies. If the pool being rated has a high share of certain loan types that have traditionally led to higher delinquencies on the originator's portfolio, then the loss estimate for the pool is appropriately increased (vis-à-vis the estimate for the overall portfolio) and vice versa. This analysis is then used in arriving at the final loss for the pool (discussed later).

Some of the important features that typically help assess portfolio performance include:

Asset – related

- Asset type: for instance, in the case of CVs - MHCVs, LCVs, Pickups
- Use of assets - Personal use or commercial use
- Collateral type (in mortgage loans- like land, residential house, commercial establishment and so on)

Borrower – related

- First time buyers or borrowers
- Salaried or Self-employed
- Large fleet operator or small road transporter (SRTO) - in the context of CVs
- Debt Burden Ratio
- Credit Bureau/ CIBIL score

Loan Features – related

- Original Tenure of contracts
- Loan to value (LTV) ratio
- Ticket Size
- Interest Rate
- Loan Cycle (used primarily for unsecured loans)

Other Features

- Geographical distribution
- Seasoning profile
- Overdue profile
- Peak overdue profile
- Obligor concentration

The above parameters have been discussed subsequently in this note. Other than the criteria mentioned above, ICRA also analyses additional parameters in a portfolio, which may be specific to the originator or the dominant asset category in the pool.

Past Pool Performance

ICRA also incorporates the performance of the originator's previously rated pools into its rating exercise. The delinquency movement, prepayment trends, collection and credit enhancement and other important parameters are studied to understand which pool characteristics are responsible for the observed pool behaviour.

Analysis of Pool Characteristics

The selected pool could deviate positively or negatively from the overall portfolio. In most cases, an individual pool of loans is better than the portfolio on some parameters and weaker on others.

Key Parameters of the pool

The key pool features that ICRA analyses are as follows:

Asset- related

- **Asset Category**

Each asset class has unique characteristics and performance drivers. ICRA has observed that some asset classes have an inherently weaker performance than others. The performance of different asset classes may also vary across originators. The Indian securitisation market is dominated by asset classes like mortgage loans (both housing and loan against property), vehicle loans and microfinance loans

- **Loan Purpose or end use**

ICRA has observed that often, the loan servicing behaviour also has a correlation with the end use that the underlying asset is put to. For instance, a house bought for occupancy by the borrower is likely to have a lower default risk than a house bought for investment purposes, since a borrower is less likely to forgo his/ her place of residence. In the case of car loans, cars purchased for personal use and those purchased for commercial use have also exhibited different performance - in the first case the debt repayment would generally be dependent on the customer profile, whereas in the latter case it may be highly dependent on the revenue stream generated by the asset (car) itself.

Borrower-related

- **Borrower Profile**

Borrower profile is based on various parameters such as age, occupation, income level and so on. While some factors may have a significant impact in a certain portfolio, their impact may not be as significant in others. Though ICRA does not classify borrowers explicitly as prime and sub-prime, certain borrower characteristics help differentiate borrower quality. ICRA has observed that borrowers belonging to different age groups show different repayment patterns. Similarly, ICRA has observed different delinquency patterns for the salaried and self-employed borrowers, especially in the mortgage and car loan portfolios. ICRA thus analyses the borrower profile of a pool vis-à-vis the originator's portfolio to assess the strength of the pool and the delinquencies that could potentially arise because of this parameter.

- **Debt Burden Ratio**

An important indicator of the borrower's ability and willingness to pay is the debt burden ratio. To ensure that the borrower's obligation is consistent with income, the lenders compare the annual debt repayment obligation of an obligor to his annual income. ICRA has observed that, a higher ratio indicates greater stress on the obligor and hence a greater probability of default, but this need not be true for the portfolio of every originator.

- **Credit Bureau/ CIBIL Score**

A healthy bureau score would reflect a good track of payment of the borrowers and hence a lower propensity to default for that borrower. However, some borrowers may have a track record of

skipping some interim payments and hence their CIBIL score may be lower, which could mean a relatively higher propensity to default for such borrowers.

Loan Features - related

- **Original Loan Tenure**

A long tenure contract exhibits more volatility than a short tenure contract due to the fact that in a long-tenure contract, the build-up of owner's equity is more gradual as compared to a shorter tenure contract, all else being equal. Also, borrower income over a longer period may be more difficult to predict. This generally results in an increase in the probability of default as the loan tenure increases. Nevertheless, for a given loan amount, a longer tenure also means a lower per-month instalment burden, which may mean greater likelihood of timely servicing. Hence, the portfolio of the lender needs to be analysed to understand loans of which tenure are likely to perform better or weaker.

- **Loan-to-Value Ratio**

The loan-to-value (LTV) ratio implies how much of the underlying asset is being financed. LTV is an indicator of the borrower's leverage when the loan application is initially filed. This is an important factor only for secured loans. Though lower LTV (lower financing and higher down payment) typically indicates lower risk, this need not always be true across originators and asset classes. In many portfolios, high LTV loans do not necessarily lead to high losses, since a higher LTV loan is given selectively.

- **Ticket Size**

Historical ticket size analysis has shown mixed results. In the case of unsecured Personal Loans, this has been observed to be an important factor. ICRA analyses high and low ticket loans based on the observed past behaviour of obligors in the originator's portfolio.

- **Interest Rate/ Yield**

The credit policy of originators typically defines the interest rate to be charged to different customers. Interest rate can be used as a risk differentiator since the interest rate on a particular loan often indicates the risk posed by the borrower. ICRA analyses the lending policy and norms of the originator to assess if interest rate is used as a risk differentiator by the lender. This factor needs to be judged together with the overall interest rate level in the portfolio across different vintages. This is because the credit policy may have been modified over time and loans given to customers with the same risk profile at different points in time may have different interest rates. In addition, in the case of mortgage pools, floating or fixed interest and the reset clause are also important factors to consider.

- **Loan Cycle**

Loan Cycle or the number of times a borrower has taken a loan from the lender becomes an important factor for analysis in the case of unsecured loans, where there is no collateral – hence collateral value or LTV criteria hold no significance here. The number of loans a borrower has successfully repaid provides some comfort about the track record of the borrower, particularly in the case of MFI loans.

Other Features

- **Overdue Status/ Peak Overdue**

ICRA has observed that eventual loss from contracts that were overdue at the time of the initial rating, are significantly higher relative to losses from contracts that are current at the time of securitisation. Similarly, eventual loss from contracts that have a history of overdues but are current at the time of securitisation are observed to be relatively higher in comparison to contracts with no overdue history. ICRA factors the overdue status-based distribution and the past payment record of the pool contracts into its loss estimation.

- **Seasoning Profile**

Seasoning represents the number of instalments that have been paid/ or become due for payments post the origination of a loan. The RBI Guidelines of 2012 stipulate a Minimum Holding Period (MHP) requirement based on the tenure of the loan. The MHP indicates the minimum amount of time a loan needs to be on the books of the issuer before it is eligible for securitisation Usually a loan that has paid regularly in the early months is less likely to default later on account of some equity build-up. Ability and willingness of the borrower also gets established. Thus, high seasoning in a pool is always a source of comfort. ICRA's analysis across pools has also revealed less eventual loss from contracts that are relatively more seasoned.

- **Geographical Mix**

The performance of various regions - zones/ states/ cities - in a portfolio is based on a variety of factors such as political issues, economic stability, various state specific local issues and the originator's presence in the region. Additionally, in the case of mortgage loans, different geographies may experience a different degree of volatility in the price of the underlying asset, which is also factored in our analysis. Hence the higher presence of any specific geography in the pool, which is performing well in the portfolio may be beneficial to the pool, while the higher presence of a weak performing geography in the pool vis-à-vis the portfolio may be a disadvantage to the pool. Additionally, a geographically more diversified pool is considered to be more beneficial than a concentrated pool as the impact of any negative developments in any specific location is likely to be less if the pool is geographically more spread out.

- **Obligor Concentration**

A more diversified pool implies lesser dependence on any particular loan for the pool performance. Hence, higher diversification (i.e. high granularity and less concentration) is always preferred. Typically, a pool can be considered granular if any contract in the pool has less than 1% share in the total pool. ICRA models a concentrated pool differently from a regular granular pool which is discussed under the Structural Risk Analysis section.

Pool versus Portfolio

As discussed earlier, the base case loss is derived from the SPA analysis of the portfolio. Adjustments are then made to this base case loss to reflect the specific pool characteristics (in comparison to the portfolio characteristics).

This is illustrated in the table below for a sample commercial vehicle loan pool.

Table 6: Deriving final adjusted pool loss estimate – an illustration

	Loss Estimate
Base case loss	3.0%
Seasoning Adjustment	-0.2%
Overdue Adjustment	+0.3%
LTV Adjustment	-0.2%
Geographical Adjustment	+0.3%
Final adjusted pool loss estimate	*3.20%*

The adjustments are made for the seasoning and overdue categories such that the loss expected from any contract in the pool is similar to the loss observed historically from contracts with similar seasoning and overdue profile.

The performance of the past rated pools of the same originator helps ICRA understand how ICRA's estimate of loss from the earlier pools has differed from their actual performance and what the key characteristics of the overdue loans were. The base case loss thus adjusted for various parameters like seasoning, overdue, LTV, Geography and so on, gives the final adjusted loss estimate for the pool.

The standard deviation derived from the static pool analysis and the loss estimate is used to calculate the co-efficient of variation, which is used in the modelling exercise (discussed later) to assess the adequacy of the credit enhancement in the pool.

3. Structure Risk Analysis – Modeling the cash flows

The final step in rating an ABS or RMBS transaction is modelling the projected cash inflows and cash outflows. The uncertainty in the quantum and timing of the actual cash inflows arises out of the possibility of delinquencies, losses as well as prepayments in the pool. On the other hand, the quantum and timing of cash outflows is driven by the terms of the transaction, including the number, yield and inter-se seniority among the various tranches, incidence of expenses, and the credit enhancement mechanism.

For modelling the inflows ('the asset side'), ICRA attempts to factor the various different possible scenarios of pool collections through a simulation exercise. For modelling the outflows ('the liability side'), the simulated collections are allocated as per the 'cashflow waterfall' stipulated in the transaction documents. The objective of the cash flow analysis is to assess the adequacy of the credit/ liquidity support that would be required for the desired rating. The higher the rating for the instrument, the lower is the associated default probability and the expected loss, and thus, through an iterative process, varying levels of credit enhancement are tried out to assess the adequate level of credit enhancement, with which the estimated defaults and losses to the instrument being rated are commensurate with the benchmark level of the same for the rating.

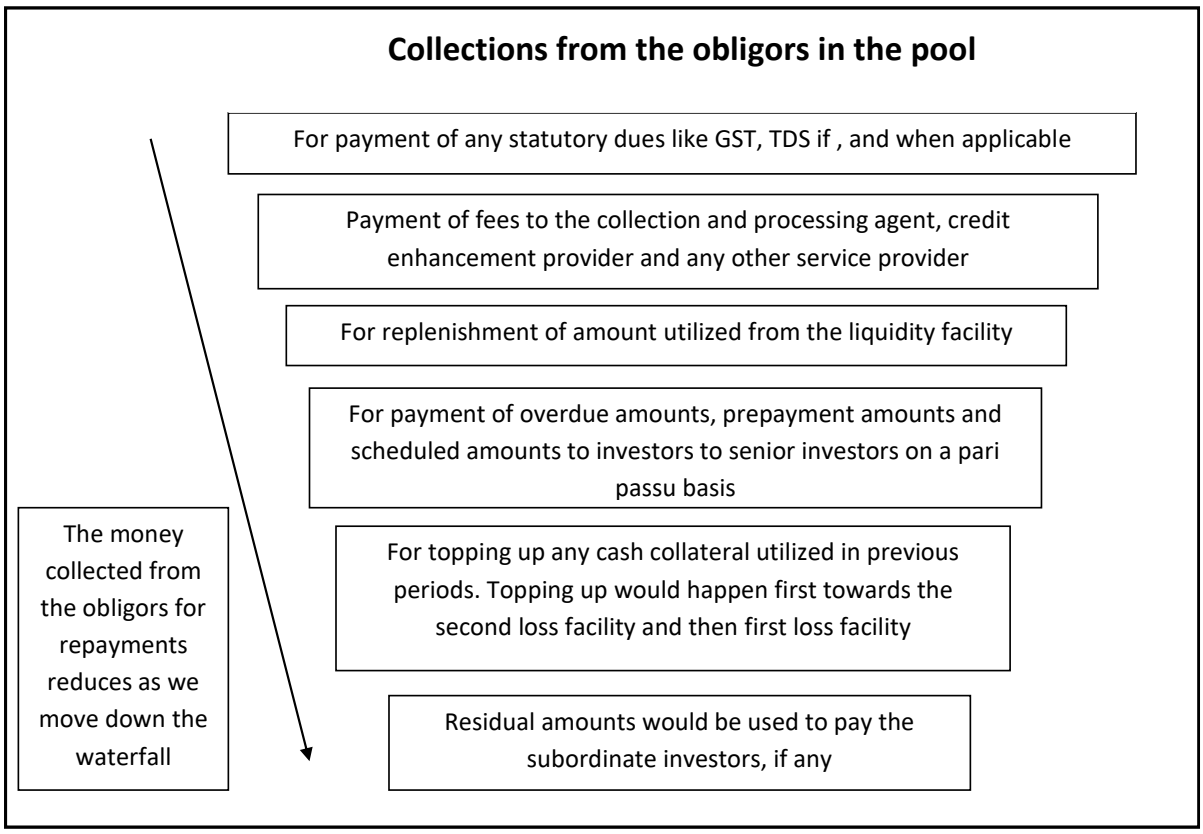
The key variables for the simulation are losses and prepayments. The key inputs, viz., mean and standard deviation are calibrated based on the collateral analysis as described earlier in this report. In a diversified retail loan pool, all the underlying loans are not expected to default simultaneously. Indeed, certain loans may pay for a certain period and default later. Thus, another input into the model is the timing of the losses, i.e., the period over which the losses happen or the loss build-up. ICRA's assumption on the loss build-up typically depends on the nature of the asset class and historically observed trends.

The cash flows are further modified for the expected prepayment rate and also the pace of prepayment at different points. Prepayments can also have an impact on credit enhancement utilization.

Modelling Methodology

The scheduled investor payouts are calculated by ICRA based on the pool cashflows, the structure of the transaction and the payment priority (i.e. waterfall mechanism, given below).

Figure 2: A typical waterfall mechanism



ICRA's cash flow modelling for rating securitisation transactions involves simulation of potential losses, delinquencies and prepayments in the pool. In each scenario the pool collections so simulated are allocated as per the 'cashflow waterfall' stipulated in the transaction documents. A certain credit enhancement figure is also entered into the model. The losses and prepayments are assumed to follow a log-normal distribution. The mean and the Co-efficient of Variation (CoV) are calibrated on the basis of observation from the performance of the Originator's portfolio/ past rated ICRA pools. ICRA's estimate of the variability of losses also takes into account the track record of Originator and the obligor concentration in the pool.

In all simulated scenarios, the incidences of default to the investor as well as the extent of loss to the investor in the event of default are measured. These are then compared with ICRA's internal benchmarks for the desired rating.

Modelling performance of highly concentrated loan pools

In a concentrated pool, the performance of the pool is influenced by the performance of a few large obligors. The variability of loss in case of a concentrated pool would be much higher than that of a regular granular pool and the assumption of lognormal distribution of loss would not hold. A benchmark which ICRA uses to determine whether a pool is granular is the share of the top obligor (or entity in case the borrower is a corporate) in a pool should be low. Likewise, there are benchmarks for the share of top 5 and top 10 borrowers in the pool, as well. If the pool has significantly higher obligor concentration, it may be deemed to be concentrated/ non-granular.

In the case of such concentrated pools, ICRA models the inflows on the concentrated portion and the granular portion separately. In respect of the concentrated sub-pool, ICRA models the default and recovery on each exposure individually, wherein each borrower's probability of default depends on its rating/ rating view. The defaults follow a binomial distribution with certain correlation between the defaults of multiple borrowers. The level of correlation depends on various factors such as geography, industry, borrower etc. The granular sub-portion of the pool is modelled using the lognormal distribution approach. The cashflow from both the sub-pools are merged and run through the cashflow waterfall. A certain degree of correlation between occurrence of default is often assumed between the concentrated and granular portion. Thereafter, the rating of the

instrument and credit enhancement adequate for the same is assessed in the same way as that while modelling for rating granular transactions earlier in this note.

Incorporation of interest rate risk

Interest rate risk arises in a transaction on account of the PTCs being priced differently from the underlying loans in the pool; for instance, the loans in the pool could be on floating-rate while the securities are fixed-rate, or vice versa. While this is not a very common occurrence, what is more likely is the presence of 'basis risk', i.e., the underlying loan pool and the PTCs being both variable but each linked to a different benchmark. For instance, the loans could be linked to the Originator's Prime Lending Rate (PLR) or Marginal Cost of Fund based Lending Rate (MCLR) while the yield on the securities in question could be linked with an external benchmark like G-Sec rate. In such cases, while the two could be broadly expected to move in tandem, there could be a lag. To factor the basis risk, ICRA typically stresses the EIS in such transactions by assuming adverse interest rate movement over certain periods of time during the pool's tenure.

Forms of credit and liquidity support

The scheduled pool cash flows may be affected due to delays in repayments or prepayments, and payments to the investor may potentially vary. In order to protect the investors from shortfalls owing to delay or defaults in the pool, credit enhancement is generally set aside in a transaction. The credit enhancement is provided only at the initiation of the securitisation transaction and can be provided by the originator or a third party. The credit enhancement may be in-built in the structure or may be provided through an external source. The following section discusses the forms of credit enhancement that ICRA has seen across rated transactions.

Subordination of Excess Interest Spread (EIS)

EIS refers to the difference between the pool yield and the aggregate of the investor yield and any taxes and expenses paid in the transaction. n most cases, the originator has a subordinate claim on the EIS, thus the EIS functions as the first line of support for investor payments.

While the EIS helps offset losses in a securitised pool, transactions cannot rely on this form of credit enhancement in isolation. This is because the credit losses, re-pricing of loans (both increases and reductions in interest rate; mostly in the case of mortgage loans in India) and prepayments that occur throughout the life of a pool may reduce the EIS available. However, in mortgage loans, if the interest rate on loans increases, then the EIS available may also increase. The EIS, after meeting any shortfalls in the pool, flows back to the originator on a monthly basis. This arrangement is the most prevalent structure. However, there are also structures where the EIS remains in the structure and provides cover over future shortfalls as well.

Over-Collateralisation or Principal Subordination

Over-collateralisation or subordination refers to securities that have a lower priority in claims from the pool receivables. These provide a cushion to the senior investors since the subordinate investors receive any residual payments only after all the payment to the senior tranche and all the expenses for the pool have been met. In the Indian market, the originator usually retains the subordinated piece. However, the securities can also be tranched on the basis of seniority such that junior investors get their share after the senior investors have been paid off and the Originator gets the residual cashflows after both the senior and the junior tranches have been completely paid off.

Cash Collateral

Cash collateral is one of the most common forms of credit enhancement provided in rated transactions. The cash collateral is deposited with a bank with a rating acceptable to ICRA. The cash collateral account is operated by the Trustee.

In certain transactions, the cash collateral may be split into a First Loss Piece (FLP) and a Second Loss Piece (SLP). In such a case, the SLP is utilised only when the FLP has been completely exhausted. The SLP is topped up (for any utilised portion) before the FLP due to its relative seniority in the structure. Notwithstanding such a split though, the entire cash collateral is available for meeting shortfall in investor payouts. Also, in transactions with multiple PTC series, part of the cash collateral may be tranche-specific.

Despite the presence of a high EIS/ subordination in the structure, ICRA believes in stipulating a certain minimum cash collateral level in a structure. This is done so as to protect against any contingency (for

example delay in remitting collections for the month or any temporary MIS related issue at the Originator's end) that may lead to some sudden temporary shortfall in the pool.

Corporate Undertaking/ Guarantee

A corporate undertaking/ guarantee can also be provided in lieu of cash collateral and functions similar to cash collateral. In such cases, the rating of the Undertaking Provider/ Guarantor would also usually become relevant.

Liquidity Facility

A liquidity facility is one which is designed to meet shortfalls in scheduled payouts only to the extent of the shortfalls arising out of contracts in shorter overdue buckets, typically upto 90 days past due. The liquidity facility also helps tide over temporary cash shortages, which may arise due to timing differences between the receipt of cash flows from the underlying assets and payments to the investors. All other shortfalls would be met from other forms of credit enhancement (such as cash collateral). The liquidity facility is inherently senior to the senior investor i.e. the pool receivables are first used to top up the utilised liquidity facility and then pay the senior investors. Generally, a certain fee is charged by the liquidity facility provider for any utilisation of this facility (generally paid at the top of the waterfall). This is not a regular form of credit enhancement as many issuers and investors use cash collateral, which should be used to meet shortfalls from 90+ delinquency contracts, to meet the shortfall that the liquidity facility is expected to meet.

Reserve Account

A reserve account is provided for in some transactions, to trap any residual cashflows, after meeting senior payouts and topping up of cash collateral. In the absence of the reserve account, such excess cash flows would have typically been paid out to the originator. A reserve account is often used in conjunction with a performance-linked trigger, wherein upon the trigger getting breached—for instance, collection efficiency falling below a stipulated %--the reserve account may be activated.

4. Counterparty Risk Analysis

There are various counterparties to a transaction – the servicer and originator (both typically being the same in the Indian context) being the primary ones. Other counterparties typically include trustee, cash collateral providers, guarantee providers, Interest Rate Swap provider, liquidity facility providers and account banks. ICRA analyses the risk posed by each of these counterparties in a transaction and factors the risk into the final ratings assigned.

- **Trustee**

A trustee or the investor's representative is a very crucial counterparty to the entire transaction. The trust purchases the pool of loans from the Originator and issues securities backed by the same to the investors. On an ongoing basis, the trustee receives collection from the servicer and passes them as per the waterfall mechanism to the investor. In the event of any shortfall in collections in meeting the payout, the trustee also utilises the credit enhancement to mitigate the same. In the event of the trustee not being able to carry on its roles properly, then the transaction documents typically provide an option to replace the trustee with the investors and rating agency's approval.

- **Cash Collateral Provider**

The cash collateral provider is typically the Originator; however some part of the Cash Collateral, typically the SLP can be provided by a third party (sometimes in the form of guarantee also). The cash collateral should ideally be in the name of the trustee. However, in most transactions, the cash collateral is typically held with an account bank in the name of the originator with a lien marked to the trustee.

- **Account Bank**

The cash collateral for securitisation transaction is held with an account bank. Therefore, the Account Bank is an important counterparty and must be adequately rated (for example, in transactions where PTCs are rated at AAA level, the Account Bank must be rated at least AA-/A1+) and transaction documents should provide for replacement of the bank if the ratings are downgraded below the threshold level for the rating of the PTCs to remain unaffected, *ceteris paribus*. Therefore, the counterparty with which the cash collateral is deposited also has a bearing on the rating and draws comfort from the liquidity of the cash collateral.

- **Guarantee/ Undertaking Provider**

Certain transactions also have credit enhancement in the form of an undertaking or guarantee. In these cases, ICRA's rating on the PTCs is usually capped at the rating of the corporate guarantor/undertaking provider (initially as well as at the time of surveillance)[6]. If the guarantor were to get downgraded, ICRA's ratings on the PTC would reflect this rating action.

- **Servicer**

The servicer plays an important role in a transaction as it is responsible for the collections from accounts/borrowers in a pool. Typically, in domestic securitizations, the originator plays the role of servicer as well. A servicer with efficient collection processes can positively impact a pool's performance. ICRA performs due diligence on the servicer by analyzing its collection processes (what action the collection team takes for correcting delinquency in different buckets, which collection process is outsourced versus retained in-house), strength of the collection team, expertise of the servicer in the asset class being securitized, sophistication of the monitoring systems and quality of back-up systems.

Since the role of the servicer is crucial to the pool's performance, the servicer's credit rating is an important quantitative input for ICRA's rating on the ABS and RMBS issuances. ICRA will typically not rate an ABS or MBS instrument more than four or five (in some cases) notches above the servicer's base rating (or rating view) at the transaction initiation stage. If a transaction provides for a back-up servicer upon a rating downgrade of the original servicer, ICRA would perform a similar due diligence on the back-up servicer's operations.

[6] However, guarantee from a bank rated upto 2 notches lower than the rating of the PTCs may be permitted, subject to the criteria that if the difference between the two ratings widens to more than 2 notches (possibly due to downgrade in Guarantor rating), either the Guarantor would be replaced or the guarantee would be invoked for the full amount by the Trustee within a period of 30 days from the rating action.

- **Commingling Risk**

This risk typically occurs due to a lag between receiving the collections from the pool of borrowers and paying the funds to the investors. In a given month, as funds are collected from the borrowers, they are merged with the servicer's cash flows. Next month, the collections are transferred into a Trust Account from which payments are made to the investors. The risk principally arises before the funds are transferred to the Trust Account and the pool cash flows merge with the cash flows of the servicer. If the servicer was to go bankrupt during this time, there is a chance that the pool cash flows could potentially be treated as part of the bankrupt servicer's estate. Any legal proceedings would also result in a delay in the investor payouts. This risk is generally low given the presence of highly-rated servicers in most Indian securitisation transactions. Upon a rating downgrade, the transaction documents could provide for a back-up servicer or more frequent transfers of the pool cash flows from the servicer's account to the Trust Account. Certain transactions also have a reserve to mitigate this risk – as discussed in the credit enhancement section.

- **Interest Rate Swap Provider**

An interest rate swap may be incorporated into a transaction to mitigate the potential interest rate mismatch when the PTCs are priced differently from the underlying pool. The rating of the swap provider is also an important input with regards to providing the timely support when called upon.

- **Liquidity Facility Provider**

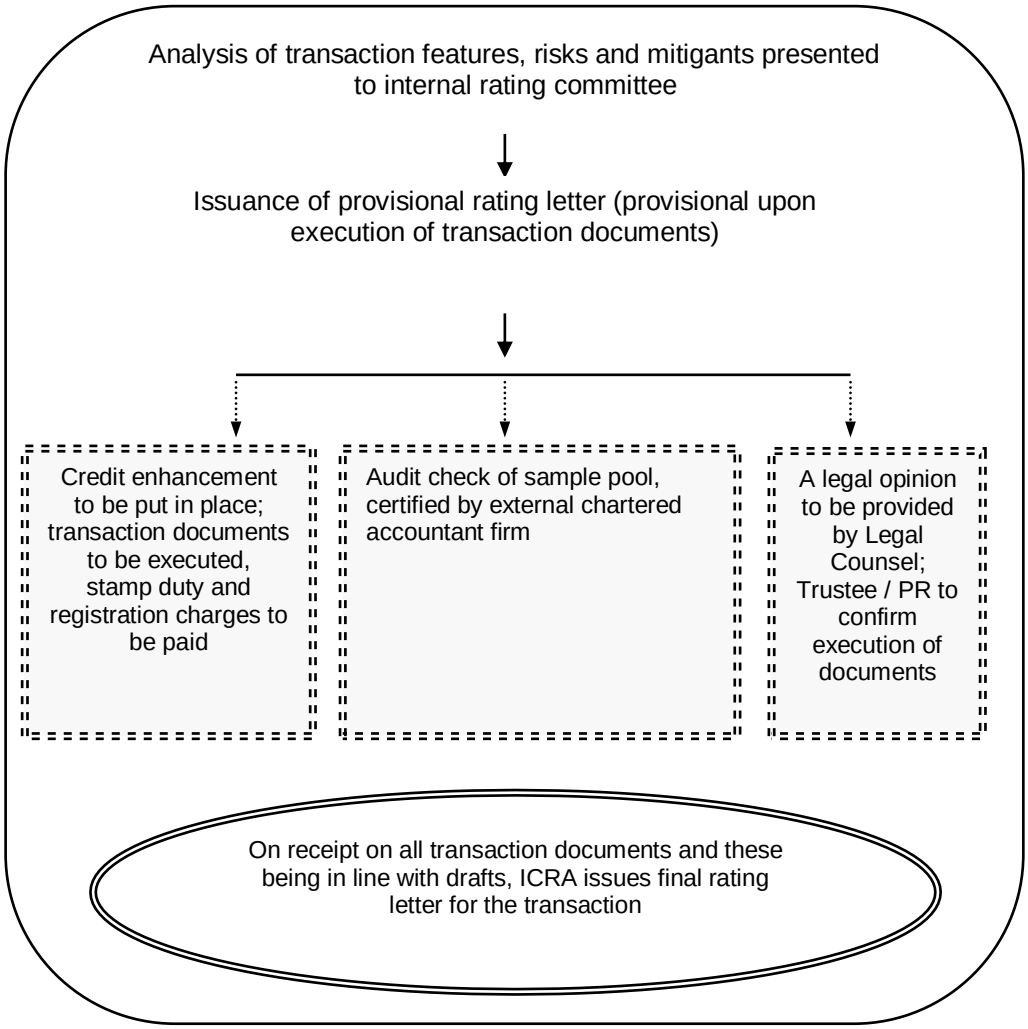
A liquidity facility smoothens the cash flows in a transaction. If there are shortfalls on account of delinquent loans in a pool, the liquidity provider would provide funds on a temporary basis to meet investor payouts. Any amount extended under a liquidity facility is generally repaid at the top of the waterfall in the next month. Rating criteria for the liquidity facility provider would be the same as Guarantee provider (mentioned earlier).

Post Execution checks

Issuance of the Final Rating Letter

After the transaction features have been analysed, a presentation is made to the internal credit rating committee of ICRA. The entire process post execution of the transaction to the issuance of final rating letter (which needs to be completed within a stipulated time frame) has been illustrated in the chart below.

Figure 3: Post Analysis- rating committee process to issuance of final rating letter



Surveillance of rated transactions

ICRA periodically (usually monthly) receives an update on the performance of the rated pool i.e. the collections, payouts, delinquency profile, utilisation of credit enhancement (if any) and so on from the trustee. Using this data, ICRA monitors the performance of the rated pool throughout the transaction's life to ensure that the rating outstanding adequately reflects the current credit risk on the instruments. If the actual asset performance at any time deviates from the performance expected at the time of the initial rating, ICRA would reassess the rated tranches as required. Reassessment of ratings may result in an upgrade, a reaffirmation or a downgrade of the ratings.

ICRA releases update on the performance of all ABS and RMBS pools rated by it, on a quarterly basis. These reports provide a summary of the key performance parameters for all the live ABS and MBS ratings (which are in the public domain) assigned by ICRA. These reports are available on the ICRA website.

Summing Up

The current methodology being used by ICRA has been effective in rating various asset classes and different securitization structures being rated in the Indian market. Some modification in the methodology maybe incorporated from time to time for assessing the various structures. The approach being used by ICRA to evaluate risk and the protection required for a pool under stressed conditions incorporates ICRA's experience in analysing credit risk of the underlying asset class coupled with statistical techniques to assess the adequacy of the credit enhancement for the specific rating level. The assumptions for a particular rating may change from time to time based on market or economic conditions, the specific structure of a transaction, issuer specific characteristics or even based on some new factors that may have been observed.

Contact us for any feedback or comments at: methodologies@icraindia.com

ANALYST CONTACTS

Vibhor Mittal
+91 22 6114 3440
vibhorm@icraindia.com

Abhijeet Ajinkya
+91 22 6114 3434
abhijeet.ajinkya@icraindia.com

ICRA Limited

CORPORATE OFFICE
Building No. 8, 2nd Floor, Tower A; DLF Cyber City, Phase II; Gurgaon 122 002
Tel: +91 124 4545300; Fax: +91 124 4050424
Email: info@icraindia.com, Website: www.icra.in

REGISTERED OFFICE
1105, Kailash Building, 11th Floor; 26 Kasturba Gandhi Marg; New Delhi 110001
Tel: +91 11 23357040-50; Fax: +91 11 23357945

Branches: **Mumbai**: Tel.: + (91 22) 24331046/53/62/74/86/87, Fax: + (91 22) 2433 1390 **Chennai**: Tel + (91 44) 2434 0043/9659/8080, 2433 0724/ 3293/3294, Fax + (91 44) 2434 3663 **Kolkata**: Tel + (91 33) 2287 8839 /2287 6617/ 2283 1411/ 2280 0008, Fax + (91 33) 2287 0728 **Bangalore**: Tel + (91 80) 2559 7401/4049 Fax + (91 80) 559 4065 **Ahmedabad**: Tel + (91 79) 2658 4924/5049/2008, Fax + (91 79) 2658 4924 **Hyderabad**: Tel +(91 40) 2373 5061/7251, Fax + (91 40) 2373 5152 **Pune**: Tel + (91 20) 2552 0194/95/96, Fax + (91 20) 553 9231