CRISIL Ratings methodology for ABS transactions

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1 Executive summary

Asset-backed securitisation (ABS) is the securitisation of non-mortgage retail loans through an intermediary (a special purpose vehicle [SPV]) typically set up as a trust. While commercial vehicle loans have been the dominant asset class in the Indian ABS market, receivables backed by other types of loans—car, construction equipment, two-wheeler, utility vehicle, tractor, unsecured personal, gold, microfinance, and micro, small and medium enterprise (MSME)—have also been securitised.

The CRISIL Ratings framework for assessing the credit quality of ABS transactions encompasses an analysis of:

- Portfolio and processes of the originator

- Characteristics of the underlying pool of loans and comparison with the portfolio

- Counterparty and legal risks

- Cash flow analysis and credit enhancement

2 Scope

This article[1] describes the CRISIL Ratings approach to rating ABS transactions. CRISIL Ratings also analyses the sufficiency of credit enhancement in securitisation transactions, with a focus on:

- Projection of base case pool collections

- Subjecting pool collections to stress that varies with the rating

- Sufficiency of credit enhancement to cover shortfalls in pool collections compared with investor payouts for a specific credit rating

There is another variant of securitisation transactions—direct assignment of pools of loans—which is also prevalent in India. CRISIL Ratings provides its estimate of ultimate credit losses (or loss estimates) likely in such pools. Among the various aspects discussed in this article, analysis of the originator's portfolio and processes, analysis of the pool and estimate of the base case shortfalls are relevant in the loss estimate exercise.

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[1] This article is being republished following a periodic review of criteria in September 2021. The previous version of this article, which was published in September 2018, can be accessed here: https://www.crisil.com/content/dam/crisil/criteria_methodology/structured-finance/archive/CRISILs_rating_methodology_for_ABS_Transactions_Sep2018.pdf

3 Portfolio and processes of the originator

3.1 Portfolio analysis

Portfolio analysis involves a detailed analysis of historical asset performance. This analysis can be split into two:

1. Static pool analysis

2. Dynamic portfolio analysis

3.1.1 Static pool analysis

Static pool analysis serves as a good reference point to project the performance of the pool being securitised. Cash flow projections based on static pool analysis are appropriate because the securitised pools are also static.

A static pool refers to a pool of contracts originated in a particular period of time, say a month or a quarter. There is no addition of contracts to the static pool over time, unlike a portfolio to which contracts are added every day. Static pool analysis entails a study of the behaviour of such a pool over time. The contracts in the pool may be selected on the basis of specific parameters, and there is no addition or deletion of contracts in the pool once securitised.

Illustration 1: Performance of sample static pools

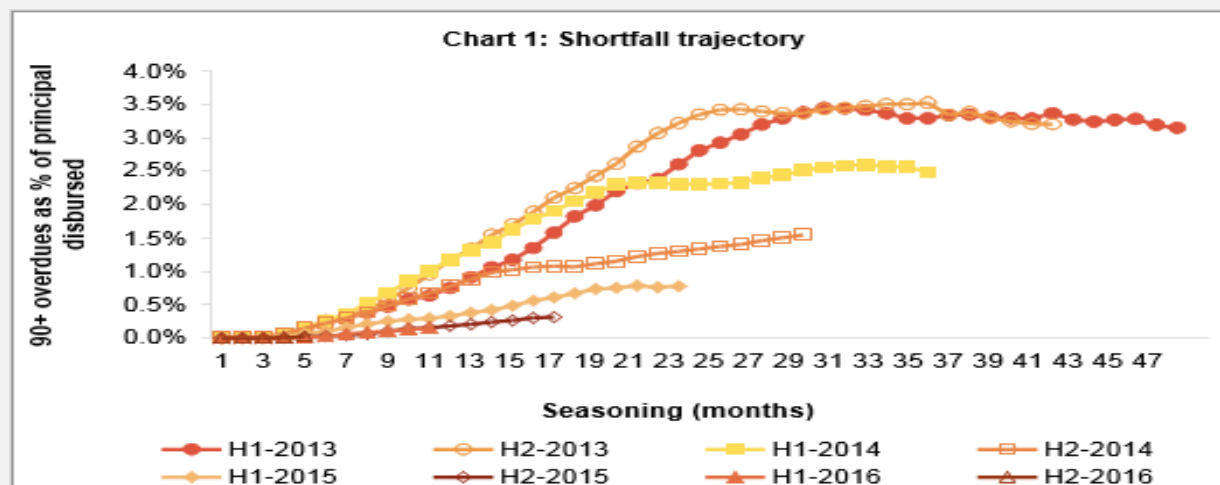

Chart 1: Shortfall trajectory

Chart 1 shows the trajectory of performance of contracts originated in specific periods (six months in this case). Contracts originated in the first half of 2014 have exhibited lower overdue, indicating better performance, than contracts originated in the first and second halves of 2013. Contracts from vintages of 2015 and 2016 have performed even better.

CRISIL Ratings calculates loss expectations based on overdue levels in static pools across vintages.

To analyse static pools, CRISIL Ratings considers the performance of all the contracts originated over several years by an originator, and then analyses contracts originated in a particular period (for example, a quarter or half year) as one static pool. The performance of earlier rated pools of the same originator is also taken into consideration.

CRISIL Ratings analyses static pool performance based on various parameters such as type of asset, whether the asset is new or pre-owned, original tenure, loan amount, geographical distribution of borrowers, and loan to value (LTV) ratio.

The analysis of the static pool helps CRISIL Ratings arrive at the assumption of base shortfall for the pool being securitised. The base shortfall usually corresponds to the peak shortfall observed in the static pool of the originator. It serves as a measure of the shortfalls expected in a pool (similar to the portfolio) in a business-as-usual scenario.

Illustration 2: Interpretation of base shortfall

Assume that the base shortfall estimated is 4.5% for a pool with a principal of Rs 100 million. This indicates that the peak shortfall expected in collections during the life of the transaction is likely to be 4.5% of Rs 100 million -- that is, Rs 4.5 million. In other words, overdue at any point in time during the tenure of the transaction is not expected to exceed 4.5% of Rs 100 million or Rs 4.5 million in a business-as-usual scenario.

Static pool performance may be affected by changes in several micro and macro factors such as the economic environment, characteristics of the asset class, and underwriting practices of the originator. These factors, along with the characteristics of the pool being securitised, are key inputs for determining the base shortfall assumptions for the pool, which, in turn, are used to project the base case pool collections.

3.1.2 Dynamic portfolio analysis

In dynamic pools, contracts may be added every day. Dynamic portfolio analysis provides insights into recent performance and trends in the originator's portfolio, which may not always be available in static pool data. Dynamic portfolio analysis of CRISIL Ratings comprises:

● Delinquency analysis

● Analysis of prepayment data

3.1.2.1 *Delinquency analysis*

Delinquency analysis[2] refers to segregation of contracts in 'buckets' based on the number of days they have been overdue. It provides a quick measure of portfolio quality and is used by financiers[3] to monitor performance of their portfolios.

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[2] Also referred to as ageing analysis
[3] Also referred to as lenders. The terms financier and lender can be used interchangeably. Specifically, in context of securitisation, financiers may be referred to as originators, as they originate the contracts (loans) being securitised

Illustration 3: Delinquency analysis

As on		Current	1-30	31-60	61-90	91-120	121-180	180+	Total
March 31, 2014	POS	640	80	39.2	16	4.8	13.6	6.4	800
	Dpd	80.0%	10.0%	4.9%	2.0%	0.6%	1.7%	0.8%	100%
March 31, 2015	POS	800	100	39	20	11	20	10	1000
	Dpd	80.0%	10.0%	3.9%	2.0%	1.1%	2.0%	1.0%	100%

All amounts in Rs million

In a rapidly growing portfolio, days-past-due (dpd) levels may be understated as contracts usually perform relatively well in the initial months. Moreover, recently disbursed contracts cannot move to higher dpd buckets.

In such cases, CRISIL Ratings calculates lagged delinquencies, that is, instead of taking the principal outstanding (POS) of the current month as the denominator, the POS with a lag of, say, one year is considered. In the example above, 180+ dpd as on March 31, 2015, lagged by one year, is 1.25%, against an un-lagged 180+ dpd of 1%.

Under delinquency analysis, the POS on current contracts (those contracts which have no overdue amounts pending to be collected) will belong to the current bucket, POS on contracts that are one-month overdue will belong to the 1 to 30 dpd bucket, and so on. The amounts in different buckets are then divided by the total POS to arrive at the exposure of the pool in each bucket, as shown in Illustration 3.

While lagging overcomes some limitations of delinquency analysis, it does not consider write-offs. In cases where financiers do not expect to make significant recoveries from the borrower or the underlying asset, they resort to write-offs. Writing off loans leads to recognition of losses and the exposure is usually removed from the portfolio of the originator in the delinquency analysis. Thus, the exposure does not show up in any of the delinquency buckets, which leads to an apparent improvement in the dpd profile of the portfolio. All else being equal, originators adopting aggressive write-off policies will show better delinquency levels than others.

Hence, CRISIL Ratings obtains historic write-off data, net of recoveries from previously written-off contracts. The cumulative write-offs can then be seen at various points of time. This cumulative figure can be seen as a percentage of portfolio principal, say, 12 months prior to the current date. This could give a proxy for net losses on a static pool basis.

3.1.2.2 Analysis of prepayment data

Prepayment in the underlying pool can affect cash inflows (collections from the pool) to the trust. Hence, CRISIL Ratings studies monthly prepayments on the originator's portfolio and average prepayment levels in that asset class across originators. The prevailing interest rate scenario and the interest rate at which the contracts to be securitised were entered into are also factored in while calculating prepayment scenarios for the pool.

3.2 Analysis of the originator's processes

The CRISIL Ratings methodology involves both qualitative and quantitative analysis. The analysis of the originator's operations is an important qualitative factor. This involves an analysis of management quality, experience of the originator in the specific asset class, goals and strategies of the management, and the size and market position of the originator. The method of origination (such as directly or through agents), underwriting standards, sanctioning authority and process, collection and recovery mechanisms, and pre- and post-disbursement documentation also indicate the quality of the originator's operations. Even within a specific asset class, originators may choose to focus on lower risk or higher risk sub-segments as part of their strategy. Hence, the quality of origination and underwriting norms impacts the performance of the assets.

4 Analysis of pool characteristics

Pool characteristics are a good indicator of the expected future performance of the pool. Securitised pools are typically cherry-picked, that is, the quality of the underlying pool of loans may be better than the portfolio quality. CRISIL Ratings bases its analysis of pool characteristics on two aspects:

Analysis of characteristics of the underlying pool of loans

Comparison of the pool with the portfolio

4.1 Analysis of characteristics of the underlying pool of loans

CRISIL Ratings studies various parameters in the underlying pool of contracts and draws on its database and experience of the Indian market to ascertain the credit implications of these parameters. A comprehensive list of parameters that provide valuable insights into the pool is given below:

● Asset class

● LTV ratio

● Original tenure

● Geographical distribution

● Borrower profile

● Borrower diversification

● Seasoning profile

● Loan cycle

● Interest rate

● Loan amount

● Overdue profile

4.1.1 Asset class

CRISIL Ratings analyses various segments within a given asset class if they have different characteristics or have performed differently. For instance, the behaviour of a pool backed by car loan receivables will be different from

that of a pool backed by microfinance loan receivables. Similarly, within the car pool, the used and new vehicles may differ significantly in performance and loss levels.
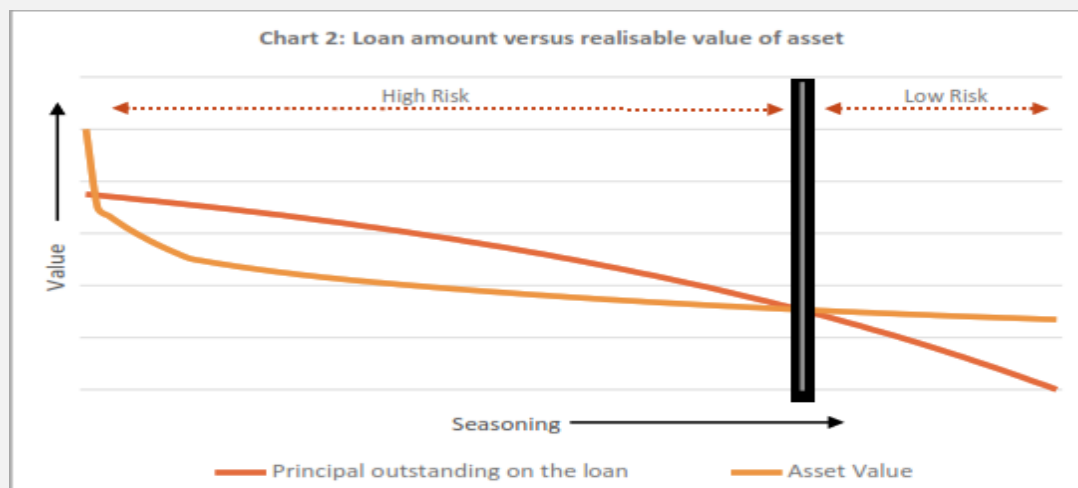
Other factors, such as the originator's familiarity with customers, and the efficiency and rigour of the originator's collection mechanism are also studied. CRISIL Ratings then bases its analysis on the specific factors affecting the performance of a particular lender. Asset class has been discussed in further detail in CRISIL Ratings criteria document titled *'Primer on evaluation of risks in securitisation transactions',* available on www.crisil.com.

4.1.2 LTV ratio

LTV ratio is the loan amount disbursed as a percentage of the value of the asset. This parameter is important for all asset-backed financing. A low LTV indicates higher initial equity of the borrower in the asset and, hence, makes default on loan repayment unattractive to the borrower. However, if the LTV is higher, the risk of loss on the loan also increases. Given the unsecured nature of microfinance loans, LTV is not a relevant parameter for securitisation originated by microfinance institutions (MFIs).

Illustration 4: Loan amount versus realisable value of asset

Consider a vehicle loan as shown in Chart 2. The vehicle undergoes higher depreciation in the initial months, but the rate of depreciation gradually reduces with time. On the contrary, the outstanding loan amortises at a slower pace in the initial months as the principal forms a small component of the monthly instalments during this period. This may result in a situation where the outstanding loan is higher than the market value of the vehicle. Thus, this period may be vulnerable to losses, as the borrower has little to lose by defaulting.

Chart 2: Loan amount versus realisable value of asset

As more instalments are paid over time, the value of the vehicle continues to decline at a comparatively slower pace and remains lower than the outstanding loan amount. However, there comes a time when depreciation starts to taper off, and the value of the vehicle becomes higher than the outstanding loan amount. The length of these phases will vary based on loan characteristics such as the type of vehicle, value of the vehicle, tenure, and LTV.

4.1.3 Original tenure

It has been generally observed that all else being equal, longer tenure implies higher uncertainty. Thus, the higher the original tenure of contracts, the greater the risk of losses.

The underlying rationale for this is similar to that of LTV. Typically, a longer tenure contract will see slower amortisation of the loan than a short tenure contract for the same amount. Thus, the high risk period (*Chart 2 in Illustration 4*), where the realisable value of the asset is lower than the principal outstanding on the loan, is longer. A pool dominated by long-tenure loans would, therefore, be significantly riskier for a considerable part of its tenure than a pool with shorter maturity loans.

4.1.4 Geographical distribution

Geographical concentration can affect pool performance due to the influence of socio-economic conditions in a particular region. What constitutes concentration is decided based on factors such as the geographical spread of the pool, regional diversification within a particular state in which there is concentration, and economic stability of the region in question.

For instance, in microfinance loan securitisation, given the small scale of operations of many MFIs and sensitivity to political risks, CRISIL Ratings evaluates geographical concentration at the district and branch level in addition to the state. CRISIL Ratings subjects a geographically concentrated pool to higher stress scenarios than a diversified pool.

4.1.5 Borrower profile

Borrower segments vary in their characteristics, making assessment of the borrower profile essential.

Within a pool of commercial vehicle loans, CRISIL Ratings studies the proportion of small truck operators and large fleet operators. A large fleet operator has business spread across multiple customers and industries, apart from having higher negotiation power than a small truck operator. This results in greater ability of a large fleet operator to continue operations in a challenging business environment, and thus a lower credit risk.

Similarly, the proportion of salaried and self-employed segments in a pool backed by car loans or personal loans is a good indicator of the pool's profile. This is because salaried employees have a steady income that can be assessed, while that of self-employed borrowers may not be as accurate.

Analysis of the borrower profile provides valuable indications about a pool's likely repayment behaviour.

4.1.6 Borrower diversification

Borrower diversification ensures that the pool's performance is not overly dependent on the performance of a few borrowers. In a pool with low granularity, that is, high borrower concentration, a large proportion of cash flows is expected from a small number of borrowers. Hence, in the event of default by these borrowers, a high proportion of the pool will be at risk. Thus, CRISIL Ratings subjects a concentrated pool to more stressful scenarios than one with lower borrower concentration. On the contrary, a pool with higher granularity, that is, a high number of contracts (say 10,000 or more), is likely to have low borrower concentration and CRISIL Ratings may factor in the benefit of diversification in its analysis.

4.1.7 Seasoning profile

Net seasoning refers to the number of instalments paid by the borrower (total seasoning minus overdue status minus moratorium period[4]). CRISIL Ratings considers net seasoning of the contract as an important performance driver.

As timely instalments are paid, borrower discipline regarding debt repayment is established. A few months of minimum net seasoning filters out cases of fraud to a large extent—it has been observed that borrowers with the intent to defraud the lender usually stop paying the instalments a month or two after disbursement.

As can be seen in *Illustration 4*, loan contracts with very high levels of seasoning will typically see a good amount of borrower equity build-up, thereby reducing the borrower's incentive to default in future. On the contrary, contracts with low seasoning witness limited build-up of the borrower equity in the asset.

CRISIL Ratings takes into account the weighted average net seasoning of the pool at the time of securitisation and the seasoning profile of the contracts in the pool. A pool with higher weighted average net seasoning will be assumed to have a lower risk than a similar pool with lower weighted average net seasoning.

4.1.8 Loan cycle

The loan cycle is a relevant parameter in the analysis of securitisation transactions of microfinance or MSME loans. A borrower's loan cycle, as provided by the financier, indicates whether the borrower is a first-time client or a repeat client. A borrower, who has been through multiple loan cycles with the same institution, has a track record of having repaid multiple loans taken from the same financier.

Consequently, the risks associated with loans given as second or higher cycle loans to borrowers with demonstrated ability to repay are distinct from those of first cycle loans, where the credit history of the borrower is limited. CRISIL Ratings takes into account the proportion of second or higher cycle loans in the pool at the time of securitisation. The higher the proportion of such loans in the pool, the lower the credit risk of the pool.

4.1.9 Interest rate

Riskier customers are typically charged higher interest rates. A comparison of the weighted average interest rate of the pool with the market interest rate scenario at the time of origination can, therefore, be a reasonable proxy for the credit quality of customers. However, this needs to be seen in light of the regions the originator operates in, and the level of competition in those regions. Furthermore, certain asset types might be charged higher interest rates than others. CRISIL Ratings takes into account these aspects while determining stress levels to be applied in the analysis of such pools.

4.1.10 Loan amount

All else remaining equal, a big ticket loan is generally perceived to be riskier than a small ticket one. Typically, the loss severity for a larger loan on the same asset to the same borrower will be higher than for a smaller loan.

However, the credit quality of the customer will also influence the likelihood of default. For instance, a large loan might be to a big and highly creditworthy fleet operator, which typically has the advantage of diversification of the

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[4] Moratorium period refers to the initial loan tenure when the borrower is not liable to pay instalments. For example, some borrowers may be given a loan for 36 months, but there may be only 34 instalments to be collected, which means the first two months are the moratorium period.

end use of vehicles, and hence, a lower probability of default. This is also evidenced in the high default and loss rates in small ticket, unsecured personal loans given to economically weaker borrowers.

4.1.11 Overdue profile

The overdue profile of the pool is analysed in a similar manner as the bucket-wise segregation under delinquency analysis of the portfolio. CRISIL Ratings' evaluation of static pools of various originators and asset classes in the past shows that collections from one-month overdue contracts are lower than those from current contracts. Similarly, a two-month overdue contract tends to exhibit weaker collections than a one-month overdue contract.

CRISIL Ratings takes into account the proportion of overdue contracts along with the weighted average seasoning of the pool. Thus, a pool with low seasoning and high proportion of overdue contracts indicates a weak credit risk profile, and carries higher risk of losses. On the contrary, a pool with a low proportion of overdue contracts and high weighted average seasoning would comprise borrowers who have paid instalments on time. Such a pool would carry lower risk of losses.

4.2   Comparison of the pool with the portfolio

CRISIL Ratings also bases its analysis of the pool on the past performance of the originator's portfolio. As securitised pools may often be cherry-picked, the quality of the underlying pool of loans may differ from the portfolio quality. CRISIL, thus, benchmarks pool characteristics against the portfolio of the originator to evaluate whether the pool is likely to perform better or worse than the portfolio. Accordingly, higher level of losses are assumed where the pool is weaker than the portfolio, whereas due benefit is given in cases where the pool is stronger than the portfolio.

CRISIL Ratings compares the pool and the portfolio characteristics on key parameters such as geography, LTV, interest rate, original tenure, balance tenure, borrower profile, and asset category. The performance is benchmarked with delinquency status such as 90+ dpd or 180+ dpd. This helps to ascertain whether the pool has a better or weaker credit risk profile than the portfolio, for a particular characteristic.

Illustration 5: Pool versus portfolio analysis

State	Portfolio		Pool proportion
	Proportion	90+ dpd	
Andhra Pradesh	30%	1.0%	10%
Maharashtra	20%	1.5%	15%
Karnataka	25%	2.0%	30%
Tamil Nadu	25%	3.0%	45%
Total	**100%**	**1.9%**	**100%**
Weighted average pool quality			**2.3%**

This illustration above compares the pool with the portfolio in terms of geographic distribution. The pool derives a greater proportion of its cash flows from Karnataka and Tamil Nadu than the portfolio does. These are the relatively weaker states in the portfolio, as visible from the higher delinquencies in these regions.

On the whole, the weighted average pool quality, after superimposing the 90+ dpd levels seen in the portfolio is 2.3%. This is higher than the portfolio 90+ dpd of 1.9%. This suggests that the pool is weaker than the portfolio and will attract some penalisation. On the contrary, a pool that is better than the portfolio is given appropriate benefit.

CRISIL Ratings performs similar analysis for other parameters such as LTV, interest rate, original tenure, borrower profile, and asset category.

5   Counterparty and legal risks

5.1   Counterparty risk analysis

Counterparty risk primarily comprises two kinds of risks:

- Servicer risk

- Commingling risk

5.1.1   Servicer risk

In India, the originator usually continues as the servicer for the underlying contracts even after securitisation. Investors in securitisation transactions are exposed to the risk of bankruptcy and non-performance of the servicer, making the servicer the most crucial counterparty in the transaction. While it is legally possible to appoint an independent third party servicer for a fee, an alternative servicer is unlikely to be able to service the securitised pool with the same efficiency as the originator.

The sustained performance of the servicer throughout the tenure of the pool is a crucial element of the securitisation process. To assess servicer risk, CRISIL Ratings analyses qualitative factors such as:

- Management quality of the servicer - length of experience in the business, goals and strategies of the management

- Size, market position, and reach of the servicer

- Collection process and organisation structure of the servicer - collection strategies and follow-up mechanism

- Quality of management information systems (MIS) - critical for efficient monitoring of the performance of the securitised pool

CRISIL Ratings also looks at the servicer's credit risk profile in the context of the pool tenure. While analysing microfinance securitisation transactions, the CRISIL Ratings MFI grading[5] of the MFI is considered in case CRISIL Ratings does not have a rating/ internal view on the servicer.

Servicer risk analysis indicates whether there is a need for a back-up servicer. If there is a back-up servicer, CRISIL Ratings carries out the same analysis for such a servicer, apart from evaluating the following factors:

- Familiarity of the back-up servicer with the primary servicer's operations

- Underlying asset class of the pool

- Back-up servicer's track record in the asset segment

- Size and geographical spread of the pool vis-à-vis the backup servicer's operations

In such cases, CRISIL Ratings will appropriately factor in the cost of bringing in a back-up servicer, including the potential deterioration in collection performance.

5.1.2 Commingling risk

This risk refers to the mixing of pool collections with the servicer's own cash flows. In Indian securitisation transactions, the servicer typically collects instalments from the underlying borrowers in the pool in a particular month and deposits the money into a trust and retention account[6] (TRA) set up for the securitisation transaction in the next month. In the interim, the collections lie with the servicer and may commingle with the servicer's own cash flows. While these collected amounts are held in trust by the servicer, if the servicer goes bankrupt, there could be partial or total loss of commingled amounts, or delayed recovery due to legal proceedings. CRISIL Ratings assesses the risk of bankruptcy of the servicer by analysing the credit risk profile of the servicer.

5.2 Legal risk analysis

Legal risk assumes great importance in securitisation transactions. Instruments issued under securitisation transactions may have a rating different from that on a plain vanilla instrument issued by the originator. The main reason for this is that the SPV is bankruptcy remote from the originator. Bankruptcy remoteness requires that the assets belonging to the SPV will not be attached with the assets of the originator in the event of bankruptcy of the originator.

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[5] Microfinance grading (mfR grading) reflects the current opinion of CRISIL Ratings on the ability of an MFI to conduct its operations in a scalable and sustainable manner.

[6] Also referred to as collection and payout account.

Legal risk analysis comprises an analysis of:

- True sale of the pool receivables to the SPV

- Bankruptcy remoteness of the pool and cash collateral

- Compliance with local laws such as those related to stamp duty payment and registration

For detailed criteria on legal risks, please refer to CRISIL Ratings opinion piece 'Legal aspects analysed for structured finance transactions', available on www.crisil.com.

6 Cash flow analysis and credit enhancement

6.1 Cash flow analysis

After the aforementioned analysis, CRISIL Ratings creates a customised cash flow model for the transaction. The cash flow model comprises three major steps:

- Projection of pool collections (inflows)

- Projection of investor payouts (outflows)

- Comparison of inflows with outflows

6.1.1 Projection of pool collections (inflows)

Based on an analysis of the static pool and moving portfolio delinquencies, CRISIL Ratings arrives at the base case shortfall assumption for the pool. Pool collections are projected based on this assumption and stress cases are then built up to derive the stressed inflows from the pool. Stresses are determined keeping in mind the following factors:

- Specific rating for the instrument

- Comparison of the pool with the portfolio

- Volatility in historical asset performance of rated pools

- Prepayment expectations for the underlying asset class

- Track record of the originator

- Geographical concentration

- Borrower concentration

6.1.2 Projection of investor payouts (outflows)

Depending on the structure of the transaction and the priority of payment, the expected investor payouts are calculated. These payouts represent the total amount payable to the investors.

6.1.3 Comparison of inflows with outflows

Once the pool inflows and outflows are computed, they are compared on a monthly basis to derive monthly surpluses or shortfalls. These monthly shortfalls/surpluses are cumulated to arrive at the cumulative shortfalls at the end of each month. The peak of these monthly cumulative shortfalls is a key input to determining the enhancement requirement for the investors as it represents the maximum shortfall that needs to be covered during the transaction tenure.

6.2 Forms of credit enhancement

In the Indian context, credit enhancement is typically provided by the originator. Credit enhancement can be split into two broad categories:

- External credit enhancement

- Internal credit enhancement

As per a Reserve Bank of India (RBI) circular dated July 1, 2013, the original amount of credit enhancement can be reset and the excess withdrawn by the credit enhancement provider subject to the RBI guidelines.

6.2.1 External credit enhancements

External credit enhancements are forms of credit enhancement that expose investors to counterparties other than the underlying borrowers. They may be classified as:

- Cash collateral

- Bank guarantee or corporate guarantee

6.2.1.1 Cash collateral

Credit enhancement can be maintained in the form of cash or equivalents. This includes cash deposited in a designated cash collateral account, fixed deposits, or investments in liquid mutual funds. The cash collateral account can be operated only by the trustee. Any shortfall in investor payouts can be met by the trustee by drawing on the cash collateral account.

For cash collateral maintained in the form of fixed deposits, the credit quality of the bank holding the fixed deposit also becomes a consideration while evaluating the transaction. If cash collateral is in the form of investments in liquid mutual funds, the credit quality rating/rating view (CQR) of the fund is analysed.

6.2.1.2 Bank or corporate guarantee

Originators sometimes arrange for a bank guarantee or give a corporate guarantee as credit enhancement. These forms of enhancement work in a similar manner as cash collateral. For meeting shortfalls, the trustee will send a notice to the guarantor invoking the guarantee. For bank guarantees, CRISIL Ratings considers the credit rating of the bank to evaluate the counterparty risks. If the credit enhancement is in the form of a corporate guarantee, CRISIL Ratings evaluates the counterparty risks based on the credit rating of the guarantor.

6.2.2 Internal credit enhancements

Internal forms of credit enhancement are available on account of the structural features of the transaction. These may be further classified as:

- Subordination and over-collateralisation

- Excess interest spread (EIS)

6.2.2.1 Subordination and over-collateralisation

Multiple instruments (tranches) of senior or subordinated nature may be issued under a securitisation transaction. An instrument is classified as senior or subordinated based on the waterfall mechanism for the transaction.

A senior instrument will be first entitled to the pool collections, followed by the subordinated tranche. The subordinated instrument provides a cushion against shortfalls in pool collections for the senior investor payouts.

Over-collateralisation for a given tranche is the extent of protection offered by its subordinate tranches

Illustration 6: Subordination in securitisation transactions

If the scheduled pool EMIs in a month are Rs 100 and senior investor payouts are Rs 90, the subordinated strip accounts for the remaining Rs 10. The collections from the pool will first be allocated to the senior investor; only the balance, if any, will be paid to the investor in the subordinated instrument. If the pool collections are Rs 95 in that month, Rs 90 will be paid to the senior investor and the balance Rs 5 is paid to the investor in the subordinated strip. However, if the collections were only Rs 90 or lower, the entire pool collections are paid to the senior investor.

6.2.2.2 EIS

EIS represents the difference in interest yield on the pool assets and the yield payable to the investors. EIS in transactions structured at par is typically subordinated to the investor payouts. The effect of EIS is, therefore, similar to that of over-collateral. If there are any shortfalls in the pool inflows, the EIS will first be utilised to meet these shortfalls. The remaining EIS may then either flow back to the originator or be trapped in the TRA. EIS, when trapped on a monthly basis, is available to meet shortfalls in the subsequent months as well. However, prepayments and re-pricing may result in substantial variations in the EIS in the pool.

6.2.3 Minimum cash collateral requirement

CRISIL Ratings believes that a minimum cash collateral/ guarantee is needed in the structure for contingencies. One such contingency is failure/ breakdown of the servicer's MIS. The performance of a securitisation transaction depends solely on the collections from the pool. These collections are deposited by the servicer in the TRA a few days before the payout date.

The amount to be deposited into the TRA is ascertained by the servicer through the MIS report, typically generated at the beginning of the month after collections. If the servicer faces a system failure or breakdown, MIS generation could be delayed. Consequently, the servicer will not be able to ascertain the amount to be deposited into the TRA. Hence, collections will not be deposited into the account on time. In such a case, the investor payouts can only be made through utilisation of the external forms of credit enhancement in the transaction.

The primary factor considered for the amount of minimum cash collateral/ guarantee needed is the adequacy of the servicer's disaster recovery system.

Evaluation of servicer's disaster recovery system

Given the importance of MIS in an ABS transaction, the servicer must have adequate disaster recovery systems. CRISIL Ratings considers the following when evaluating a disaster recovery system:

- Adequacy of contingency plans

- Frequency of testing and audit

- Risk of permanent loss of information

- Time taken to recover normal functioning

- Any untoward incident in the past

The benefit of adequate disaster recovery systems ensuring sufficient time between the MIS generation and payout dates to enable recovery from any system failures, is appropriately factored into the minimum cash collateral/ guarantee requirement for the transactions.

Conclusion

The CRISIL Ratings criteria for rating ABS transactions factors in the key parameters that may impact the credit quality of securitised instruments. Quantitative parameters such as delinquencies, pool and portfolio characteristics, counterparty credit ratings and cash flow projections, along with qualitative factors relating to originators' processes, servicers' capabilities and legal aspects of the transaction are critical to determine the sufficiency of credit enhancement in securitisation transactions. The parameters for the evaluation of the reset of credit enhancement are monitored as per the RBI guidelines on 'Reset of credit enhancement' dated July 1, 2013.

List of abbreviations used

ABS	Asset-backed securitisation
SPV	Special purpose vehicle
MSME	Micro, small and medium enterprises
LTV	Loan-to-value
MFI	Microfinance institution
POS	Principal outstanding
Dpd	Days past due
MIS	Management information system
TRA	Trust and retention account
CQR	Credit quality rating
EIS	Excess interest spread

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