Evaluating risks in securitisation transactions: A primer

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Executive summary

Traditionally, a lender advances a loan to a borrower and receives principal repayment and interest payment over a period of time. In a securitisation transaction, the lender sells to a third party his right to receive future payments from the borrowers, and receives a consideration for it much before the actual maturity of the original loan. Given this distinction, investors in securitisation transactions encounter a very different set of risks from the ones involved in conventional lending. Therefore, analysis of the risks in securitisation transactions requires a separate framework, distinct from the traditional mode of analysing business risk, financial risk and management risk.

CRISIL believes the following four categories of potential risks will provide the starting steps for a meaningful analysis of securitisation transactions:

- **Credit risk** may arise in transactions on non-payment by underlying borrowers in the pool of loans because of either inability or unwillingness to pay. Analysis of the nature of the underlying asset class, the robustness of the origination processes, past performance of the originator’s overall portfolio and pool characteristics will provide pertinent insights into the credit risk associated with the underlying borrowers.

- **Counterparty risk** arises on account of non-performance of any of the counterparties involved in securitisation transactions. The key counterparties to be analysed are the servicer, the designated bank and the swap counterparties. CRISIL assesses counterparty risk using a combination of qualitative and quantitative factors. CRISIL analyses the quality of processes and systems at counterparties and, where required, employs credit rating as a proxy for the counterparties’ ability to perform over the tenure of the transaction.

- **Legal risk** may arise in a situation where if the originator goes bankrupt, there is a possibility that the bankruptcy court may attach the securitised receivables, and may decide that the pool cash flows should not be specifically earmarked to the investors in the securitisation transaction. To assess this risk, CRISIL studies the relevant transaction-related documents and requires the originator to furnish an independent legal opinion addressing relevant legal issues and uncertainties associated with the transaction. CRISIL conducts detailed analysis of legal documents to assess whether there is a ‘true sale’ of the securitised assets and whether these assets are bankruptcy-remote from the originator.

- **Market risk** arises on account of factors external to securitisation transactions. Risks arising from prepayment of loans, movement in interest rates, and other macro-economic factors fall under this category. CRISIL incorporates these risks in its analysis by applying stress levels commensurate with the transaction structure.

Scope

The focus of this article¹ is to provide an introduction to risks that investors in securitisation transactions are exposed to. The article also throws light on CRISIL’s analytical framework in evaluating securitisation transactions and the criteria adopted by CRISIL in identifying the risks in a transaction and assessing whether these risks are commensurate with the rating assigned. The risk assessment framework discussed here is applicable to both

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¹ This article is being republished following a periodic review of criteria in September 2018, with no major revisions. The previous version of this article, which was published in September 2015, can be accessed here: https://www.crisil.com/content/dam/crisil/criteria_methodology/structured-finance/archive/Evaluating_risks_in_securitisation_transactions_A_primer.pdf
pass-through certificates (PTCs) and direct assignment transactions (defined under the section “Understanding securitisation”).

**Understanding securitisation**

Typically, securitisation transactions involve sale of loan receivables by the originator (a bank, non-banking finance company, housing finance company, or a manufacturing/service company) to an intermediary (called a special purpose vehicle, or SPV), typically set up as a trust (Chart 1). The SPV issues rated PTCs to investors, and the proceeds are paid as consideration to the originator. In this manner, the originator, by selling its loan receivables to the SPV, receives consideration from the investors much before the maturity of the underlying loans. Collections from the underlying loans held by the SPV are passed on to PTC investors. The transaction is provided with a limited credit support or credit enhancement in the form of fixed deposits or guarantees, which provides protection to investors against defaults by the underlying borrowers.

**Chart 1: A typical securitisation transaction structure**

In short, the basic characteristics of a typical securitisation transaction are as follows:

- There is a sale of receivables to the SPV
- Investors subscribe to PTCs issued by the SPV and can therefore be repaid only out of collections from underlying receivables held by the SPV
- As the originator has **sold** the receivables, the investors’ recourse to the originator is limited to the credit enhancement provided by the originator at the time of securitisation

An alternative securitisation structure, called a direct assignment, is also prevalent in the market. As the name suggests, direct assignment transactions involve assignment of a pool of loan receivables directly to the investor without any association of the SPV. However, credit enhancement is not permitted in direct assignment
transactions involving banks or non-banking financial companies (NBFCs) as either a buyer or seller as per the current regulations\(^2\).

**Common cash flow structures used in securitisation transactions**

Structures have evolved based on investor risk appetite, tenure preferences and issuer requirements. The common structures include:

- **Fully amortising structures**
  
  Fully amortising structures are designed to closely reflect the full repayment of the underlying loans through interest and principal payment. Here, the principal is repaid to the investor along with interest over the tenure of the PTC. This is different from bullet structures where the entire principal is repaid at maturity.

- **Par and premium structures**
  
  In par structures, the investor pays a consideration equal to the pool principal outstanding (par value). In return, the investor is entitled to receive scheduled principal repayments from the pool of receivables along with a pre-decided rate of interest. Par structures have an element of excess interest spread (EIS) generated wherein the yield of the pool is higher than the yield on the PTCs. The originator has the right to receive the EIS amount.

  A premium structure is one where the investor pays a consideration greater than the pool principal outstanding, for the right to receive all the cash flows arising from the securitised assets.

- **Senior subordinate structures**
  
  Cash flows from securitised assets can be carved into multiple classes / tranches of securities having different tenures and risk profiles. The senior class is accorded the first claim on cash flows from the pool, whereas the subordinate class has a lower claim. Thus, in the event of shortfall in the pool collections, the subordinate class provides cushion to payments of senior classes.

- **Fixed- and floating-rate structures**
  
  PTCs can be issued at both fixed and floating rates of interest. In the case of floating rate of interest, the rate is linked to a designated index or benchmark rate. If the underlying pool comprises of fixed rate loans, then floating coupon rates introduce an element of interest rate risk in the transaction. This risk can be mitigated by using an interest rate swap with a swap provider.

**CRISIL’s framework for analysing risks and risk mitigants**

CRISIL’s criteria seeks to ensure that the ratings assigned factor in all the key risks that investors are exposed to in these transactions.

The investors in a securitisation transaction are exposed to several risks at each stage within the transaction. The schematic representation of a securitisation transaction given below shows the potential sources of risks in a typical transaction.

\(^2\) Please refer to the Reserve Bank of India (RBI) circular on ‘Revision to Guidelines on Securitisation Transactions dated May 7, 2012, and August 21, 2012
CRISIL, in its analysis of securitisation transactions, uses a four-quadrant framework to identify, classify, and evaluate risk. All the relevant risk factors identified (as shown in the schematic diagram above) fall under one of the four quadrants.
The four quadrants represent the fundamental risks in any securitisation transaction.

- **Credit risk**, or the risk of underlying borrowers defaulting
- **Counterparty risk**, or the risk on account of failure of the counterparties involved in the transaction
- **Legal risk**, or the risk centred around sale and transfer of receivables from the originator to the SPV
- **Market risk**, or risks arising because of the impact of macro-economic environment

In the following section, we shall consider each of the four risks in detail.

- **Credit risk**

  Credit risk forms a crucial element in the analysis of securitisation transactions. Typically in securitisation transactions involving a pool of loans, credit enhancements are provided to cover shortfalls in pool collections vis-à-vis investor payouts, primarily due to defaults by the underlying pool borrowers. The level of credit enhancement is sufficient to cover shortfalls in pool collections commensurate with the assigned ratings. For determining the sufficiency of credit enhancements, the key factors evaluated include the following:

  - **Asset risk**

    The nature of underlying assets is a crucial indicator of performance of the pool. For instance receivables backed by home loans given to salaried borrowers, display a completely different collection pattern as compared to receivables backed by commercial vehicle (CV) loans CRISIL’s risk continuum provides a good indication of the relative risk levels in the underlying retail loan assets, which is duly factored while determining the sufficiency of credit enhancements for various asset classes. Everything else remaining constant, low risk assets need lower credit enhancements than high risk assets do. However, in case of securitisation transactions involving corporate loans, the analysis focuses primarily on CRISIL’s credit view on the underlying borrower(s).
– **Originator risk**

The originator of the assets plays a key role in the transaction. 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. While strong origination systems and processes enhance the quality of the assets, inadequate origination systems and ineffective processes lead to poor quality assets being originated. A robust risk control mechanism and the availability of strong management information systems (MIS) are other pre-requisites for the creation of a strong portfolio. CRISIL undertakes a detailed analysis of the originator’s processes right from the generation of leads to post disbursal documentation and collection processes, so as to gain insights into the quality of asset creation. This analysis provides key inputs for the evaluation of the pool being securitized.

– **Portfolio risk**

The pool to be securitised is to be carved out of the portfolio consisting of a set of outstanding loans disbursed by the originator. The originator’s track record in this asset class, and past delinquency patterns on the portfolio could provide pointers on the possible performance of the securitised pool. For example, the historical losses in an originator’s car loan portfolio could be used as a leading indicator of possible future losses in a car loan pool. In addition, the delinquency levels of an originator’s portfolio are compared with those in the same asset class for other originators, as part of the benchmarking process adopted by CRISIL.

Portfolio analysis is a key component of the overall risk assessment framework in a securitisation. It is conducted in two forms: static pool analysis of past originations and dynamic portfolio analysis to understand the performance of recent originations. This is discussed in further detail in our criteria document titled, ‘CRISIL’s rating methodology for ABS transactions’, available on www.crisil.com.

– **Pool risks**

The quality of the pool is a crucial element in assessing credit risk. CRISIL takes into consideration pool characteristics such as pool seasoning (or the number of installments paid by borrower till date; the higher the seasoning, the better the quality), overdues at the time of selection, and loan to value (LTV) ratio, as these provide a good indicator of future performance of the pool.

Furthermore, CRISIL performs a benchmarking of pool characteristics with the overall portfolio characteristics, so as to identity any positive or negative deviation in pool quality from the portfolio quality. The parameters compared include geographic distribution, LTV, original tenure, borrower profile and interest rate. If, based on the benchmarking, the pool is ascertained to be weaker than the portfolio, CRISIL applies a higher level of stress on the pool cash flows. On the contrary, if the pool appears ‘cherry-picked’ based on positive selection criteria, the stress levels applied will be commensurately lower.

Further, CRISIL also evaluates whether the pool is exposed to concentration risks both at borrower level as well as geographical level. All else remaining equal, a concentrated pool would display higher variability in performance and hence would require higher levels of credit enhancement compared to a granular pool. The geographic concentration is evaluated at a state, city or district level depending on the asset class. For instance, for a residential mortgage-backed securitisation transaction involving housing loans, geographic concentration is evaluated at a city level as real estate trends are fairly local in nature, whereas for microfinance loans, it is usually evaluated at the state and district levels.
There are several counterparties involved in a securitisation transaction, and their performance is crucial for the smooth functioning of the transaction. In a securitisation transaction involving a pool of loans, the credit risks are modelled to determine the sufficiency of credit enhancements. However, counterparty risks are typically digital and are too large to be modelled in order to determine the sufficiency of the credit enhancement. Stringent counterparty selection and replacement requirements form the basis of CRISIL’s criteria to ensure that these counterparty risks are commensurate with the assigned rating. Key counterparty risks to be factored in a typical transaction are given below.

- Servicer risk

The servicer plays a crucial role in a securitisation transaction in the Indian context, especially in transactions involving retail assets. The investors are exposed to the risk of bankruptcy and nonperformance of the servicer. Consequently, the sustained performance of the servicer over the tenure of the pool becomes a crucial element of the securitisation process.

CRISIL evaluates the quality of the servicer’s management team, the collection processes, strategies and follow-up mechanism adopted by the servicer and the quality of the MIS systems used by the servicer. In addition, CRISIL also considers the tenure of the securitised instrument and the credit rating of the servicer. The credit rating of the servicer is taken as a proxy for its ability to continue servicing the pool over the tenure of the transaction.

- Commingling risk

In most securitisation transactions, there is a time lag between pool collections and investor payouts. Typically, the servicer collects money from the underlying borrowers in the pool in a particular month and deposits the same into the ‘Trust and Retention Account’ in the next month. In the interim, the money collected lies with the servicer and may commingle with its own cash flows. While these collected amounts are held in trust by the servicer, in the event of the servicer going bankrupt, there could be total or partial loss or delayed recovery of the commingled amounts due to legal proceedings.

Since monthly pool collections are commingled only for a short period of time, the short-term credit quality of the servicer determines the commingling risk. Consequently, CRISIL takes into account the relevant short-term credit rating of the servicer while evaluating commingling risk.

- Swap counterparty risk

In securitisation transactions, interest rate swaps (IRS) could be used to mitigate interest rate risk (defined under the section “Interest rate risks” within “Market risks”). In transactions that employ IRS, the payouts to investors depend upon the payments received from the IRS counterparty. Hence, IRS counterparty’s credit risk is relevant to the transactions.

- Counterparty risk linked to credit enhancement

The credit enhancement can be provided in two ways:

- Cash collateral, which involves maintaining credit enhancement in the form of cash and cash equivalents
- Guarantee, where the originator arranges for a bank or corporate guarantee for the equivalent amount

If the cash collateral is in the form of a fixed deposit, the investors become exposed to the credit risk associated with the bank holding the fixed deposit. Likewise, in the event a guarantee is provided, the investors become exposed to the credit quality of the bank or the corporate entity providing the guarantee. Consequently, CRISIL factors in the risks arising from these counterparties in its analysis.
A detailed discussion on CRISIL’s approach to incorporating these counterparty risks in its analysis can be found at ‘Forms of Credit Enhancement’ section in the criteria document titled ‘CRISIL’s rating methodology for ABS transactions’, available on www.crisil.com.

- **Legal risks**

Securitisation-specific legislation and a long track record of judicial decisions bring a high degree of predictability to the legal position on securitisation transactions, and facilitate the creation of transparent and well-established legal criteria for such transactions. However, in the Indian context, in the absence of conclusive judicial precedent or explicit statutory provisions on securitisation transactions, such transactions are structured by the transaction counterparties within the existing framework of the transfer of property, trust, and contract laws.

The key legal issue in any securitisation transaction is ascertaining whether the transfer of receivables constitutes a ‘true sale’, whereby the originator cannot retain control over receivables or any claim over receivables that could override the claims of the investors. A ‘true sale’ makes the assets securitised ‘bankruptcy remote’ from the originator. In other words, the bankruptcy of the originator will not impact the investors’ claim on the securitised pool’s cash flows.

Any dispute over the legal ownership of the assets is likely to result in uncertainty regarding investor payouts from the pool cash flows. Furthermore, an unfavourable ruling by an Indian court could result in outright loss for the investors, apart from raising questions over the basic concept of securitisation.

As part of its rating process, CRISIL conducts a detailed study of the relevant transaction-related legal documents. Additionally, CRISIL also requires the originator to furnish an external legal opinion on each individual transaction to ensure a high level of independent third-party due diligence on legal issues by professionals from the legal fraternity. Typically, the legal opinion covers the following factors:

(i) That the transfer of the assets is not in contravention of the underlying loan documents;

(ii) That the transfer of the assets to the SPV constitutes a true sale;

(iii) That the credit enhancement

- if in the form of cash, is bankruptcy remote from the credit enhancer/originator
- if in the form of a guarantee or corporate undertaking, is enforceable by the trustee and is irrevocable and unconditional;

(iv) That the transaction documents are valid and enforceable and not in contravention of any applicable law currently prevailing;

(v) That all transaction documents have been duly executed in accordance with the prevailing stamp duty and registration laws.

- **Market risks**

Market risks represent risks extraneous to the transaction — and include market-related factors, which could have an impact on transaction performance. For instance, a change in the interest rates may impact prepayment rates for assets. Similarly changing real estate prices could impact the performance of securitisation transactions backed by home loans.
CRISIL incorporates relevant market risks into its analysis by stressing the cash flows based on the transaction structure and underlying asset class. Thus, the initial sizing of credit enhancement for the transaction factors in appropriate level of market-related risks.

– **Macro-economic risks**

The performance of underlying loan contracts depends on macro-economic factors such as industry downturns or adverse price movements of underlying assets. For instance, a sustained decline in industrial production may result in a slowdown in the transportation industry. This may cause a strain on the cash flows of truck operators, which may in turn impact repayments on commercial vehicle loans. Similarly, a steep fall in the prices of underlying trucks may increase chances of default. The borrower may prefer defaulting on their loan repayments and letting the finance company repossess and sell their truck, rather than retaining the truck and continuing to pay instalments on time.

CRISIL applies appropriate stress levels to the cash flows arising from underlying assets to factor in these risks.

– **Pre-payment risks**

A combination of prepayments and volatile interest rates represents a difficult situation for investors. Typically prepayments of retail loans increase with a reduction in interest rates leading to reinvestment risk for investors. Investors may receive their monies ahead of schedule and may not be able to reinvest these amounts at the same yield. In certain structures, separate prepayment strips could be carved out of the pool cash flows which would be exposed to volatile cash flows on account of prepayments in the pool being passed on to them. The prepayment strip ensures that other investors (other than those who have invested in the prepayment strip) are protected from volatility in cash flows till such time that cumulative prepayments in the pool exceed the prepayment strip. CRISIL incorporates relevant prepayment assumptions in its analysis of securitised instruments.

– **Interest-rate risks**

CRISIL has rated transactions with ‘basis risk’ where the loans in the pool are based on a floating rate basis, while the investor payouts are based on a fixed rate or vice-versa. This results in an interest rate mismatch and could lead to a situation where the pool cash inflows, even at 100% collection efficiency, are not sufficient to make investor payouts. For such structures, CRISIL evaluates various interest rate scenarios, to factor the interest rate risk into the credit enhancement. Interest rate swaps may be used in certain transactions to transform interest rate risk to a counterparty credit risk.

All debt and debt-like investments suffer from interest-rate risks, as a movement in interest rate has a direct linkage to the value of the security. However, CRISIL’s rating does not address risks related to volatility in the value of the rated instrument.

**Conclusion**

The discussion above provides a conceptual construct for the evaluation of securitisation transactions. While rating securitisation transactions, CRISIL analyses the key risks, namely, credit risk, counterparty risk, legal risks and market risks.
A quick checklist for a securitisation transaction
The CRISIL Rating Rationale and the information memorandum for the transaction provide a comprehensive overview of the transaction, risks involved and mitigants for the same. A brief checklist, which investors can use for understanding the risks involved in a securitisation transaction, is provided below for reference.

Credit risk:
- Analysis of the originator
  - Past track record
  - Systems and processes
  - Past performance of similar pools by the originator
  - Disclosures by originator with respect to the above
- Analysis of the pool
  - Nature of asset class backing the underlying loans
  - Pool quality in terms of parameters like seasoning, geographic diversity, loan size, LTV, etc.
- Coverage provided by the credit-cum-liquidity enhancement vis-à-vis the historical trend of losses in that asset class for the originator

Counterparty risk:
- Track record and past experience of counterparties.
- Credit quality of counterparties
- Past experience in handling securitisation transactions

Legal risks:
- Presence of independent legal counsel
- Reputation of legal counsel
- Coverage of all the relevant issues in the opinion

Market risks:
- Extent of prepayment and interest rate risks; level of mitigation of these risks structurally or through credit enhancement
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It is India’s foremost provider of ratings, data, research, analytics and solutions, with a strong track record of growth, culture of innovation and global footprint.

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