

## Chinese Non-Performing Loan Securitizations Rating Criteria

### Contents

Summary.....	1
Data Adequacy .....	2
Methodology .....	2
Servicing Capacities and Incentives ..	2
Recovery Amounts and Timing .....	2
Structural Analysis and Cash Flow Modelling .....	3
Legal Structure and Documentation ..	4
Counterparty Risks .....	4
Related Research, Publications and Criteria .....	4

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### Summary

*(Editor's Note: We originally published this criteria article on 21 November 2017. We are republishing it following our review on 20 November 2021. We updated the author contact information.)*

These criteria present Pengyuan Credit Rating's (PENGYUAN) approach to evaluate the creditworthiness of NPL securitizations backed by non-performing loans originated in China. PENGYUAN assesses both qualitative and quantitative factors when assigning ratings to Chinese non-performing loan (NPL) transactions. Our analysis of NPL transactions typically focuses on the following:

- Servicing capacities and incentives;
- Recovery amounts and timing;
- Structural analysis and cash flow modelling;
- Legal structure and documentation;
- Counterparty risks.

The servicer's strategies and capacities play a more important role in determining the transactions' cash flows for NPL-backed securities than for traditional securitization deals. The ability of the servicer to work out the loans is crucial to the performance of the NPL transaction. PENGYUAN places significant emphasis on the experience and resources of the servicer and the alignments of servicer incentives with those of investors. In assessing servicing, PENGYUAN reviews the servicer's business plan, resources, incentives, and its historical performance. PENGYUAN also performs an operational risk review of the servicer, including its policies and procedures as well as measures for servicing continuity.

As the primary component of the quantitative analysis for NPL transactions, PENGYUAN usually conducts a loan-by-loan analysis to estimate recovery amounts and recovery timing. PENGYUAN forms its projected base-case recovery for the transaction according to the historical and expected performance of the servicer and underlying assets. PENGYUAN applies rating-specific stresses to the base-case recoveries with respect to the recovery amounts and timing.

The estimated recoveries and stress assumptions are used in PENGYUAN's cash flow model to evaluate the transaction structures. For NPL transactions, the cashflows are expected to be irregular and volatile. This raises the importance of liquidity support for mitigating the risk of cash flow timing mismatches. In the cash flow analysis, PENGYUAN assesses whether the transaction's structure and credit enhancement are sufficient to support timely and ultimate payment of interest and principal on the rated notes under the stress scenario commensurate with the assigned rating.

PENGYUAN analyzes the legal structure of NPL transactions by reviewing transaction documents and associated legal opinions. A primary focus is whether the securitization structure isolates the securitized assets from the insolvency risk of the entities participating in the securitization. For NPL securitizations, the timing and expenses of enforcement procedures of the NPLs are another key factor in PENGYUAN's legal review.

PENGYUAN assesses counterparty credit risks in NPL transactions by reviewing the counterparty dependency and evaluating the creditworthiness of the counterparty. Relative to transactions backed by performing loans, the performance of NPL transactions is more dependent on the liquidity support provided by counterparties. PENGYUAN's analysis of counterparty credit risks focuses more on the risks related to the liquidity provider in NPL transactions than in traditional transactions.

## Data Adequacy

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For NPL transactions, PENGYUAN analyzes the data provided by the servicer and issuer, which includes:

- loan-by-loan information on the underlying collateral;
- the servicer's business plan and servicing strategy;
- historical recovery data of portfolios with similar characteristics;
- loan purchase price information;
- detailed court timings by legal phase; and
- any other relevant information that is requested on a case-by-case basis.

For a transaction which does not meet the data adequacy requirements, PENGYUAN may apply more conservative assumptions, implement a rating cap on the transaction, or decline to rate the transaction.

## Methodology

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### Servicing Capacities and Incentives

The performance of NPL transactions relies heavily on the capacities of the servicer to work out the defaulted loans and generate recoveries. Considering the crucial role of the servicer in determining an NPL transaction's cash flows as the first step of its rating analysis, PENGYUAN evaluates in detail the servicer's strategy, expertise, experience, and resources. PENGYUAN also analyzes the fee structure and compensation schemes to assess whether they align the servicer's interests with investors' interests.

PENGYUAN assesses the historical performance data provided by the servicer. In general, PENGYUAN gives credit to transactions with servicers that have a long track record in successfully implementing their business plans. PENGYUAN also views positively servicers that have a good working knowledge of the underlying assets and enforcement practices.

PENGYUAN reviews the servicer's business plan that typically defines the future performance of the portfolio. The emphasis is placed on the servicer's recovery expectations and the assumptions made to determine the work-out costs, work-out timing and recovery amounts. If the servicer's business plan and collection strategies are assessed as credible, PENGYUAN will adjust its projected base-case recovery assumptions accordingly.

The alignment of the servicer's and the investors' interests is crucial in NPL transactions. Credit will be given to the transaction if the servicer participates in the transaction with its own capital in a subordinated position to the rated notes. Performance-based fees that rank junior in the capital structure also provide significant incentives. In contrast, PENGYUAN views negatively disproportionate minimum servicing fees that provide disincentives to quick work-out strategies. PENGYUAN also reviews the compensation schemes for the servicer's employees to evaluate whether the appropriate incentives exist for optimal recoveries.

PENGYUAN's analysis of servicing disruption risks focuses on the sensitivity of the performance of an NPL transactions to the temporary or permanent disruption of the servicers.

### Recovery Amounts and Timing

PENGYUAN usually performs a loan-by-loan analysis to derive its assumptions on the projected recovery amounts and timing. The servicer's business plan typically serves a starting point for estimating the expected recoveries. PENGYUAN's recovery analysis takes into account the asset types and the specific resolution strategies used by the servicer. For secured NPL transactions, PENGYUAN focuses on evaluating the recovery value of the underlying assets. For unsecured NPL transactions, PENGYUAN drives its recovery assumptions based on the static pool recovery data using statistical methods.

PENGYUAN begins its recovery analysis by assessing the servicer's business plan. PENGYUAN places particular emphasis on the methodology and assumptions used to develop the business plan. If PENGYUAN believes the business plan is reasonable and realistic, credit will be given when deriving the base-case recoveries.

In addition, PENGYUAN assesses whether the portfolio is concentrated in terms of borrowers, regions, and asset types. To the extent that the portfolio is concentrated in such aspects or dominated by a few large loans, PENGYUAN conducts sensitivity tests to evaluate the impacts of the concentration risks on recoveries.

## Secured NPLs

In determining the expected recoveries for secured NPLs, PENGYUAN typically conducts a loan-by-loan assessment to derive recovery amounts and timing for each loan in the secured portfolio. For secured NPLs, the expected recovery of each loan usually depends on the resolution strategies, the type of the collateral, the loan-to-value ratio, and the status of the legal proceedings.

Gross recoveries are typically the minimum of the following:

- the maximum amount the lender can claim on the asset;
- the total amount due to the lender including the principal and accrued interest and penalties; and
- the forced sale asset value of the collateral during the expected recovery period.

PENGYUAN expects to receive detailed information on the collateral, e.g. residential property, commercial property, plant, machinery, and land. PENGYUAN derives the expected collateral value based on:

- the provided valuation;
- the estimated current market value; and
- the projected evolution of the current price until the expected recovery date.

Forced sale adjustments are further applied to the expected market values taking into account that the collaterals need to be sold in a certain timeframe.

## Unsecured NPLs

When analyzing the recoveries of the unsecured NPLs, PENGYUAN applies a statistical approach based on the provided historical data and the servicer's collection experience. PENGYUAN analyzes the static pool recovery data and models the mean and variance of the recoveries as a function of the time since origination. The estimation of the average recovery and its volatility also takes into account other factors such as future market trends. The expected cash flows are calculated either by applying derived haircuts to the business plan or by using a simulation model, where a Beta distribution is typically chosen to fit the recovery distribution.

## Recovery Timing

PENGYUAN estimates the recovery timing according to the resolution strategies. For assets that go through legal proceedings, PENGYUAN derives the recovery timing based on the current status of legal proceedings, taking into account the servicer's ability to manage the legal process. If the loans are collected through an out-of-court settlement, the expected recovery timing depends on the willingness of the borrower to honor the settlement and the servicer's track record of implementing non-judicial resolution strategies. Considering the uncertainty of the NPLs' recovery timing, PENGYUAN may use a stochastic approach to model the recovery time for each debt obligation in the portfolio.

## Structural Analysis and Cash Flow Modelling

In NPL transactions, credit enhancement is typically provided through subordination, reserve funds, and overcollateralization. PENGYUAN reviews the composition of the proposed credit enhancement in an NPL transaction and assesses whether the credit support is sufficient to withstand potential portfolio losses and disruptions in collections in a stress scenario associated with the target rating.

PENGYUAN particularly assesses the risk of cash flow timing mismatches and any transaction structural mechanisms that mitigate this risk, given the irregular and volatile cash flows generated from NPLs. PENGYUAN also analyzes other transaction structural mechanisms, such as performance triggers, which can limit the deterioration of the portfolio.

For floating-rate notes, PENGYUAN evaluates if appropriate hedging mechanisms are in place to mitigate interest-rate mismatch risks, because the recovery cashflows are typically fixed. The lack of such hedging will lead to additional interest stresses in the cash flow analysis.

## Cash Flow Modelling

PENGYUAN performs cash flow analysis to assess the transaction structure and liquidity enhancement. The cash flow modelling replicates the transaction's structural features including the liquidity reserves and trigger mechanisms. Stress assumptions specific to different rating levels are applied to determine if the cash flow generated by the recoveries is sufficient to make timely and ultimate payment on the rated notes. Factors that are stressed include recovery amounts and timing, work-out costs, and interest rate and exchange rate (if applicable).

To simulate the expected recoveries in the cash flow model, a Monte Carlo simulation approach may be applied to account for the uncertainty of the recovery amounts and timing. If necessary, the simulation model can also incorporate the correlation in recoveries among the underlying assets.

## Legal Structure and Documentation

PENGYUAN reviews transaction documents and associated legal opinions to determine their impact on the transaction structure and whether the collateral pool is isolated from the insolvency risk of the entities participating in the securitization. Asset isolation is typically achieved by transferring the subject asset on a "true sale" basis from the originator or seller to a special purpose vehicle (SPV). To assess insolvency remoteness, PENGYUAN generally evaluates whether, in the event of insolvency of the originator, the securitized assets transferred to the SPV would not be part of the originator's bankruptcy estate and would not be consolidated with the bankruptcy estate of the originator.

The enforcement timing and costs related to the underlying assets are also part of the legal analysis for NPL transactions.

## Counterparty Risks

PENGYUAN analyzes counterparty credit risks in a NPL transaction by reviewing counterparty dependency and evaluating the creditworthiness of the counterparties such as account banks, liquidity providers, and derivative counterparties. PENGYUAN applies the same approach to analyze the counterparty risks for NPL transactions and for traditional securitization deals. Due to their non-performing nature and irregular cash flow profile, when analyzing NPL transactions, PENGYUAN places particular emphasis on the counterparty risks of the liquidity providers.

## Related Research, Publications and Criteria

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- General Principles of Credit Ratings, 21 November 2017
- Rating Symbols and Definitions, 07 May 2018

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