

**Methodological Assumptions  
Structured Finance Instruments  
SMEs CLO**

## 1. Methodology framework SMEs CLO Rating

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The present document aims to describe the credit rating process that Axesor applies to rating SMEs Collateralized Loan Obligations (CLOs) thereby assessing the creditworthiness of these particular structured securities. Axesor has developed this methodology framework in order to rate SMEs CLO securitization transactions, through the application of a set of assumptions based on the idiosyncrasies of a given country or asset type. When required, the methodology may vary by introducing any ad-hoc variables that may be required to analyse additional specific risk factors of the transaction.

Finally, this methodology will map the numeric rating resulting from the analytical process into the scale “*Axesor Long-Term Structured Finance Credit Scale*” (available for consultation on the website). In addition, the rating is accompanied by an outlook (over the next year) depending on the prospects of both the sector and the performance of the company (Outlook Methodological is available on the website).

## 2. Scope

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The present methodological framework will be applied to securities collateralized by loans granted to self-employed individuals, microenterprises, small and medium-sized enterprises (SME). Axesor (or the Agency, indistinctly) evaluates both qualitative and quantitative factors, to determine the final rating of the securitization transaction.

## 3. Quantitative factors analysis

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### 3.1 Collateral

#### 3.1.1 Historical Performance Information

Axesor relies on the historical performance provided by the originator as a key input to determine a probability of default (PD).

In order to perform a loan date-tape analysis, the originator is expected to provide from 5 to 10 years of historical data that is representative of the originators SME loan book data. The expected default rate may be higher than that indicated by the historical information observed, when the data supplied does not cover a period of significant stress. Axesor expects to receive the historical performance information in the form of static and dynamic defaults, delinquencies, recoveries and prepayment ratios by vintage of origination/default, usually on a monthly or quarterly basis. The vintages should be broken down into different categories such as asset type, debtor type.

In cases where the information provided is deemed to be insufficient, the Agency may apply a rating cap or decline to rate the transaction.

Axesor analyses the risk characteristics which may vary depending on the type of product or overall composition of the underlying portfolio.

When the portfolio is granular and diversified, Axesor will perform a detailed analysis of the underlying portfolio and its most relevant characteristics and segregate the portfolio into several groups which facilitates the analysis of common risks and helps to form an opinion on the credit quality of the securitized assets. However, when the portfolio is concentrated, Axesor may carry out a private credit assessment to derive a PD of debtors with a relevant concentration.

The loan portfolio or hypothetical portfolios created based on the terms/covenants of the transaction documents will be used in the asset model and will allow Axesor to estimate the cash flows of the underlying assets as well as other relevant aspects such as debtor and industry concentration levels and variations in the characteristics of the loans amongst others.

### 3.1.2 Loss Distribution and Expected Default Rates

Once the loan data and historical information have been analyzed, Axesor may adjust the expected default for the underlying portfolio to take into consideration variables such as the performance trends, the portfolio composition, the underwriting and servicing quality of the originator/servicer as well as macroeconomic factors.

Collateral performance is unknown and can differ significantly from expectations. The volatility of expected default rates depends on the portfolio composition.

Diversified portfolios are expected to exhibit lower volatility and default rates that are closer to the expected case. On the other hand, concentrated portfolios are expected to exhibit higher volatility relative to expected default rates. All these factors will be taken into account when modelling correlations.

Characteristics that will be considered includes: risk characteristics derived from the loan data or/and terms/covenants established in the documentation, the weighted average life, the PD assumption based on the historical information and Axesor credit risk information or based on private credit assessments and the two correlation factors that capture concentrations in debtors and industries depending on the portfolio composition.

Modelled correlations for each rating category

	AAA	AA	A	BBB	BB	B or lower
Correlation Intra-Industry	28/23%	26/22%	25/21%	22/18%	20/17%	18/15%
Correlation Inter-Industry	12/10%	11/9%	10/8%	9/7.5%	8/6.5%	6/5%

The agency relies on a Monte Carlo simulation and the portfolio default rate for each rating level is determined as percentiles of the loss distribution based on Axesor's idealized corporate default rates.

### 3.1.3 Recovery Rates

SMEs loans can be secured or unsecured. In case of secured loans backed by a real estate property, the recovery value depends on the property type (residential vs commercial) and its ranking (first or second lien).

For secured assets guaranteed by a real estate property, the following considerations are addressed:

- (i) The appraisal value of the guarantee may be adjusted to indicate possible drops or increases based on the collateral type and geographical location.
- (ii) Legal elements across each jurisdiction that affect the foreclosure process and potential regulatory changes may have an impact on the guarantees.
- (iii) Each guarantee is adjusted by the market value decline (MVD) assumptions to capture price decline and sales discount for each rating level.

Expected recovery rate:  $\text{Min (Max (Stressed value - Foreclosure costs - Prior ranking balance; 0) / Outstanding balance; 100\%)}$ .

Stressed value = Appraisal value \* (1-MVD)

Market Value Decline applied to each Rating Category

Property type	AAA	AA	A	BBB	BB	B or lower
Residential MVDs	70%	66%	60%	56%	49%	45%
Commercial MVDs	80%	76%	70%	66%	59%	55%

MVD assumed for commercial properties are higher to reflect the lower liquidity, the higher price volatility and larger average size of this asset type among other factors.

For unsecured assets, the recovery rates will generally be capped at the levels shown in the table below.

Recovery Rates applied to each Rating Category (for unsecured assets)

	AAA	AA	A	BBB	BB	B or lower
Recovery rate	10%	12.5%	15%	17.5%	22%	25%

Finally, the resulting recovery assumption for the portfolio will be compared to the historical recovery data from the originator with adjustments in some cases.

## 3.2 Capital structure

The structural features will be analyzed and incorporated into the model. They will be a key determinant of the allocation of cash flows within the structure according to the specific priority of payments established in the documentation.

Common structural features are as follows:

- **Subordination:** The existence of tranches with different payment priorities reduces the risk for senior tranches and provide credit enhancement to the notes with higher priority.
- **Triggers:** transactions might incorporate several triggers related to the counterparties and/or the portfolio performance such as:
  - *Amortisation triggers:* Restricting the pro-rata amortisation of the notes, altering the priority of payments.
  - *Reserve fund trigger:* The amortisation can usually start only when a sufficient reserve has built up and/or certain conditions on the portfolio and on the structural performance are met.
  - *Deferral triggers:* Protect the repayment of principal with higher priority over the interest payments for subordinated notes.
- **Artificial Mechanism (Write-off):** This provision mechanism protects the notes by accelerating the amortisation of defaulted loans. Generally, a defaulted loan is classified when the loan has been in arrears for a certain number of months in accordance with the documentation.
- **Excess Spread:** The difference between the weighted average interest rate of the assets and the weighted average interest rate of the notes plus senior expenses. The level of excess spread varies across transactions and depends on the underlying portfolio but might also be subject to changes during the life of the transaction.
- **Cash Reserve/Reserve Fund:** usually funded by an equity tranche or by a subordinated loan at closing in order to provide credit support. It also acts as a mechanism to mitigate liquidity shortfalls.
- **Liquidity Facility:** In some instances, the liquidity facility agreement results in credit enhancement to the notes. In practice, typically transactions may rely on liquidity facility to cover potential liquidity shortfalls but in other cases, these may act to absorb part of the losses.
- **Hedge Instruments:** Interest rate swaps or exchange rate swaps to cover interest rate and currency mismatches. In the absence of these hedge instruments, the transaction may be exposed to interest and currency risks.

The counterparty's quality and the triggers in the documentation will also be verified.

### 3.3 Cash flow and sensitivity

Cash flows analysis reflects how principal and interest collections throughout the life of a transaction are allocated, under different stress scenarios according to the priority of payments established. The analysis performed will focus on current portfolio information but also contemplate potential variations that may take place in its future composition, in the case of a revolving transaction.

In modelling the transaction, the Agency aims to capture the main structural features described in the transaction documentation. Axesor relies on the scheduled amortization, the default rates, the default timing distribution, the recovery rates, the recovery lag, prepayment rates and interest rates scenarios, to estimate the cash flows for each rating level.

Cash flow analysis allows the Agency to test the ability of the issuer to make timely interest and principal payments on the notes.

### **3.3.1 Scheduled Amortization of the assets**

The starting point is to calculate the scheduled amortization defined as the expected payments under the contractual terms of each loan. Axesor relies on the features of each loan in order to derive the amortization profile of the portfolio.

### **3.3.2 Default Timing Distribution**

The default timing distribution describes the amount defaulted in each period.

Most of the structures tend to be more vulnerable to front loaded defaults due to their impact on the excess spread. However, alternative distributions of default timings, such as back loaded scenario will be tested. Axesor may adjust default timing distributions, depending on the characteristics of the transaction.

### **3.3.3 Recovery lag**

The recovery lag measures the time span between the date that the loan is classified as defaulted and the date on which the loan is recovered.

The timing of the recovery lag mainly depends on the asset type, servicer procedures and varies across each jurisdiction. Normally, longer recovery lags cause higher negative carry cost in the absence of structural mitigants such as artificial write off mechanisms.

Historical recovery information and the loan data tape supplied by the originator will be used as a proxy. For secured assets (residential and commercial loans), Axesor assumes a recovery lag of 3-5 years and 1-3 years for unsecured assets.

### **3.3.4 Prepayment Rates**

Three prepayment scenarios are modelled: slow, medium and fast in order to establish different stress scenarios concerning the timing of amortisations. The prepayment rate is a key variable in determining the volume of excess spread.

### **3.3.5 Interest Rates Trend**

The Agency tests the structure in rising, falling and flat interest rate scenarios with the purpose of addressing any potential mismatches. The stresses consist of vectors of monthly increases/decreases.

### 3.3.6 Senior Expenses

We model senior expenses introducing stresses into the transaction for counterparty replacements (servicer for example). The stress will vary depending on the complexity of the tasks required and the availability of substitute providers.

### 3.3.7 Spread Compression

Permitted variations allow the originator to renegotiate the loans conditions, once they have been originated to provide higher flexibility. The most common features are linked to changes in the interest rate and/or the maturity profile of the loans all of which may lead to spread compression. Based on this, permitted variations according to the documentation may be stressed from the closing date.

### 3.3.8 Rating

We would generally expect that the tranches of the notes would be able to withstand all the relevant stress combinations applicable to that particular rating level, without defaulting,

Ratings are finally assigned through the exercise of a qualitative assessment by the Rating Committee alongside the consideration of model results.

The rating report will disclose what the rating addresses (i.e., timely interest payment and ultimate principal payment...).

### 3.3.9 Sensitivity

Once the notes are rated, sensitivity analysis is performed, to assure that the rating is robust, with small changes in the main parameters not resulting in a rating downgrade.

## 4. Qualitative factors analysis

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Although the quantitative analysis is the starting point to determine the rating of the notes under each scenario and its distribution, there are elements of risk associated to qualitative factors that may have an impact on the notes, therefore the final rating may differ from the modelling results.

The performance of a securitization transaction does not only depend on the credit quality of the underlying portfolio, but also on other factors such as the requirement for timely and effective action from the parties involved.

The main qualitative risks considered to assign the rating include:

### 4.1 Operational Risk (Originator and Servicer review)

Axesor's operational review is designed to understand policies, processes and practices and to reach an opinion regarding the quality of the originator and the servicer.

If Axesor believes that the quality or capabilities of the originator or/and servicer are not adequate, issuers may be required to incorporate certain structural features such as a commingling reserve, backup servicing agreements or specific triggers to address the operational risk within the respective jurisdiction.

The key areas for the assessment process are:

1. Company overview (structure, financial stability and strategy)
2. Management and staffing
3. Origination and underwriting policies
4. Administration, monitoring and recovery process
5. Quality controls and compliance procedures
6. Reporting and technology

If operational risks are not managed, evaluated and mitigated adequately and materialized in the transaction, they could have a negative impact on the credit quality of the notes.

The Agency believes that operational risks as a result of servicer interruption may lead to liquidity risk. Additionally, with respect to operational risk, the performance of the transaction can be impacted by the performance of parties involved, such as calculation agents, trustees and cash managers.

#### **4.2 Commingling Risk**

The commingling risk arises whenever cash belonging to the fund is deposited in a third-party account or is mixed with cash belonging to a third party.

In the event of bankruptcy, the cash belonging to the fund but not transferred would be at risk. Temporary commingling could lead to liquidity risk and when permanent, can lead to credit risk.

The most common structural features, to mitigate this, are the reduction of the days between the debtor's payment and the allocation of that amount into the issuer account bank (daily sweep collections), triggers replacement in place to ensure a minimum credit quality throughout the life of the notes, additional credit enhancement, liquidity facility to cover delays.

The Agency may model commingling risk by assuming at the beginning of the transaction asset flow losses equal to one month as general guidance. This stress scenario is assumed in the early part of the transaction.

#### **4.3 Counterparty Risk**

Counterparties in the transaction shall be assessed to determine the risk exposure, the materiality and the remedies in place.

The Agency believes that counterparty risk may result in a potential loss for the transaction. The agency expects that remedial actions or structural mechanisms would have to be included in the prospectus to mitigate or reduce the potential exposure.

In particular, a downgrade language definition in the form of replacement triggers shall be required to be included in the documentation of the fund. The rating required to be eligible applies to financial counterparties involved in the transaction such as the swap provider, liquidity facility provider and the bank account provider.

Note rating	Eligible Counterparty
AAA <sub>(sf)</sub> ; AA+ <sub>(sf)</sub> ; AA <sub>(sf)</sub> ; AA- <sub>(sf)</sub> ; A+ <sub>(sf)</sub> ; A <sub>(sf)</sub> ; A- <sub>(sf)</sub>	BBB-
BBB+ <sub>(sf)</sub> ; BBB <sub>(sf)</sub> ; BBB- <sub>(sf)</sub>	BB+

Remedial actions would have to be considered within 30 business days:

- Obtain a first demand, unconditional and irrevocable guarantee from a third-party entity rated at least BBB-.
- Replacement by another eligible entity rated at least BBB-.

Additionally, if the remedy period expires, and the remedial actions haven't taken place, the ratings of the notes may be lowered.

#### 4.4 Legal Risk

Legal risk refers to the risk derived from the transfer of assets to the fund or "true sale", the isolation of the assets from the credit risk of the counterparties and the bankruptcy-remoteness of the special purpose vehicle. The legal opinion of the transaction will be reviewed.

#### 4.5 Set-Off Risk

This risk arises when the SPV seeks to receive the proceeds of the securitized consumer loan, but the underlying debtor is entitled to refuse to pay because he has a set-off right against the originator/seller of the securitized loan. Set-off may be invoked by a debtor that holds a monetary claim (current account, deposit account) against the Originator/Seller which has transferred to the SPV the credit rights of the consumer loan granted to the debtor that holds at the same time the monetary claim against the Originator/Seller.

Axesor will assess the likelihood of set-off risk arising in the securitization deal and the measures implemented in order to mitigate the risk.

#### 4.6 Sovereign Risk

Sovereign risk will not be treated as an independent qualitative risk to rate the transaction. Specific macroeconomic conditions that can deteriorate the collateral quality in each country will be analyzed although Axesor will not apply a sovereign ceiling across the European countries.

#### **4.7 Other Qualitative Elements**

Depending on the jurisdiction, the transaction can be influenced by many factors, not all related to the mitigation of bankruptcy risks. Tax considerations, in the form of both potential benefits and liabilities or in relation to collections received on the assets. Axesor does not provide tax advice or confirm the validity of tax opinions or any transaction documents.

This document updates the previous version while preserving its original methodological assumptions; therefore, all existing ratings remain unchanged. In this version, the format has been updated.