

# Golden Ray S.A. Compartment 2

## New Issuance Rating Report

### Ratings

Class	Rating	Notional (EUR m)	Notional (% assets <sup>1</sup> )	CE (% assets) <sup>2</sup>	Coupon p.a. <sup>3</sup>	Legal final maturity
<b>Class A notes</b>	AAA <sub>SF</sub>	263.6	87.00	13.87	1m-EURIBOR + 0.94%	December 2058
<b>Class B notes</b>	A+ <sub>SF</sub>	13.60	4.49	9.38	1m-EURIBOR + 1.10%	December 2058
<b>Class C notes</b>	BBB+ <sub>SF</sub>	10.60	3.50	5.89	1m-EURIBOR + 1.50%	December 2058
<b>Class D notes</b>	BB+ <sub>SF</sub>	7.50	2.48	3.41	1m-EURIBOR + 3.00%	December 2058
<b>Class E notes</b>	B- <sub>SF</sub>	5.10	1.68	1.73	1m-EURIBOR + 3.98%	December 2058
<b>Class F notes</b>	Not rated	2.60	0.86	0.87	Fixed-rate 0.00%	December 2058
<b>Class X notes</b>	BB <sub>SF</sub>	6.00	1.98	0.00	1m-EURIBOR + 3.43%	December 2058
<b>Class R notes</b>	Not rated	0.01	0.00	0.00	Variable return	December 2058

1. Pool nominal principal balance. The sum of the class A, B, C, D, E, F, X and R notes' notional, as a percentage of the pool principal balance is greater than 100%. This is because class X notes proceeds were used at closing date to fund the initial liquidity reserve balance and transaction set-up costs.

2. From subordination and initial cash liquidity reserve.

3. From the first optional redemption date (after four years since closing date), class A, B, C, D and E note margins will increase from initial levels to the related step-up margin, while no step-up margin will apply to the class F, X and R notes.

Scope's analysis is based on the portfolio dated 31 October 2025 and information provided by the issuer or its related third parties. Scope's Structured Finance Ratings constitute an opinion about relative credit risks and reflect the expected loss associated with the payments contractually promised by an instrument on a particular payment date or by its legal maturity. See Scope's website for the [Scope Ratings Rating Definitions](#).

The rating on the class A notes reflects the timely payment of interest and the ultimate repayment of principal on or before the notes legal final maturity date. The ratings on the class B, C, D, E and X notes reflect the ultimate payment of interest and principal on or before the notes legal final maturity date and the timely payment of interest once the respective class becomes the most senior class of note outstanding. Scope has not assigned ratings to the class F and R notes.

Transaction details	
Purpose	Liquidity / funding
Issuer	Golden Ray S.A., Compartment 2
Originators and sellers	Enpal B.V. ('Enpal') and Enpal Heat GmbH
Servicers	Enpal B.V., Enpal Heat GmbH and EFS Deutschland GmbH
Back-up servicer	HmcS Gesellschaft für Forderungsmanagement mbH ('HmcS')
Issuer account bank	Citibank Europe plc, Germany Branch ('Citibank')
Servicer account banks	Deutsche Bank AG and Commerzbank Aktiengesellschaft
Interest rate hedge provider	Citibank Europe plc ('Citibank')
Corporate services provider	MaplesFS (Luxembourg) S.A.
Closing date	11 December 2025
Payment frequency	Monthly (on 27 <sup>th</sup> of each calendar month)
The transaction is a securitisation of a portfolio of solar and heat pump system loan receivables originated by Enpal and Enpal Heat GmbH. These loans finance the acquisition by German homeowners of solar and heat pump systems including solar panels, battery storage, electrical vehicle chargers and heat pumps.	

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### Related methodologies

[General Structured Finance Rating Methodology](#), February 2025

[Consumer and Auto ABS Rating Methodology](#), March 2025

[Counterparty Risk Methodology](#), June 2025

## Rating rationale (summary)

The ratings reflect: i) the legal and financial structure of the transaction; ii) the quality of the underlying collateral in the context of the German macroeconomic environment; iii) the ability of Enpal, Enpal Heat GmbH and EFS Deutschland GmbH in servicing the loans; and iv) the counterparty credit risk exposure to Enpal and Enpal Heat GmbH as originators and to Citibank as the issuer account bank and interest rate hedge provider.

The rated notes benefit at closing date from credit enhancement in the form of subordination, a cash liquidity reserve and excess spread. Excess spread is available to provision for defaults and any principal redirected to cover issuer revenue shortfalls.

We have incorporated the credit performance and servicing track record of the originators with respect to solar and heat pump loans and have considered the stability of the German macroeconomic environment.

The ratings reflect the transaction's counterparty risk exposure mostly to the servicers, the issuer account bank and the interest rate hedge provider. We have assessed the credit quality of the key counterparties considering public information regarding Citibank. Counterparty risk does not constrain the maximum achievable rating on the rated notes.

## Rating drivers and mitigants

### Positive rating drivers

- **Granular portfolio.** The rated notes are secured by a granular portfolio of solar and heat pump system loan receivables provided to homeowners. There are no material concentrations in terms of loans, borrowers or borrower regions.
- **Credit quality of obligors.** Most of the portfolio relates to borrowers with Schufa credit scores of A, B or C which relates to the highest credit quality under the Schufa methodology and therefore a lower expected probability of default. Moreover, Enpal's underwriting requires that the customer is registered as the owner of the property, further mitigating portfolio default credit risk.
- **Liquidity protection.** A liquidity reserve funded at closing date, adequately mitigates liquidity risk for the class A notes in the event of servicer disruption. Additionally, the transaction benefits from a principal redirection mechanism, under which principal can be used to pay revenue shortfalls related to senior costs (including senior hedge costs) and interest on the most senior class of outstanding notes.

### Negative rating drivers and mitigants

- **Young originators with limited track record.** Enpal was founded in 2017 and consequently does not have a mature business with a long performance track record. However, it is already the largest German provider of solar photovoltaic panel systems and heat pump systems for homeowners and benefits from key board and staff members with high experience in the renewable energy sector (ESG factor).
- **Unrated servicers.** The servicers (Enpal, Enpal Heat GmbH and EFS Deutschland GmbH) are not rated. Servicer risk is mitigated by the ability to appoint a back-up servicer (HmcS, Gesellschaft für Forderungsmanagement mbH) at closing date, servicer collection accounts pledged for the ultimate benefit of noteholders and the presence of a liquidity reserve.
- **Limited performance data.** Enpal has only been originating solar system loans since June 2023 and heat pump system loans since May 2024. Therefore, there are limited historical performance data on origination volumes, delinquencies, defaults, recoveries and prepayments. Given the originator's limited historical performance related to the securitised products, Scope was provided with historical performance from their financial lease book and two Schufa default studies related to customers statistically like Enpal's customers based on Schufa scores and other relevant criteria.
- **Unhedged notes notional balance.** To cover the risk of fixed-rate assets backing floating-rate notes, there is an interest rate swap agreement based on a banded notional balance. The banded notional balance could lead to a partially unhedged notes balance, depending on the actual levels of portfolio default and prepayment. The potential unhedged notes balance will impact the level of available excess spread and such a consideration has been qualitatively considered by Scope.

### Rating-change drivers

A change to the levels or parameters of the transaction's key analytical assumptions based on observed performance or new data sources, significant changes to the transaction's collateral and structural features, and a change in Scope's credit views regarding the transaction's key rating drivers could impact the ratings.

The sensitivity analysis described in section 6 provides an indication of the resilience of the credit ratings against deviations in key analytical assumptions.

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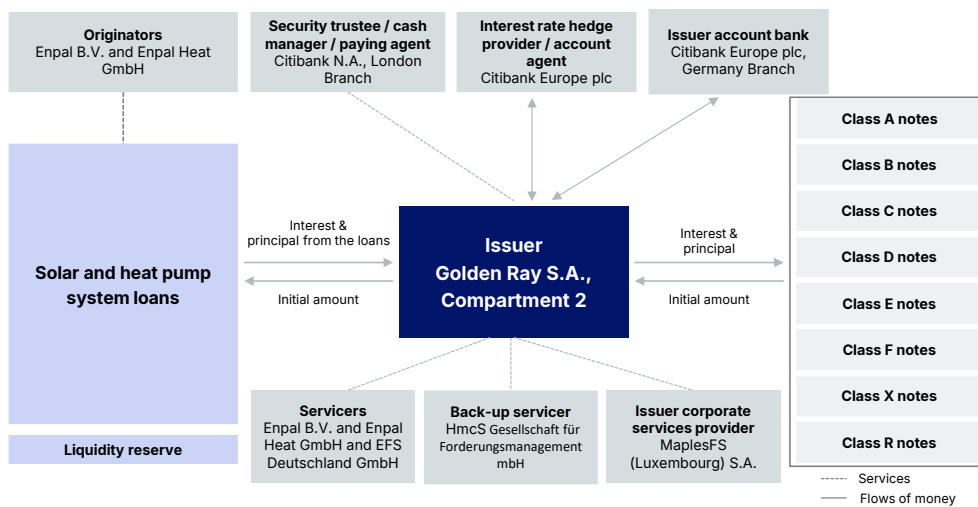
## 1. Transaction summary

The transaction is a granular static securitisation of solar and heat pump system loan receivables originated by Enpal and Enpal Heat GmbH. The loans finance the acquisition of solar and heat pump systems including solar panels, battery storage, electrical vehicle chargers and heat pumps. As of the cut-off date of 31 October 2025, the underlying portfolio totals EUR 302.9m and consists of 9,443 monthly-paying, French-amortising, instalment purchase contracts, with a weighted average fixed rate of 6.0%, granted to 9,428 private individual borrowers domiciled in Germany. The portfolio is diversified across 16 German regions, with the top three region concentrations in Nordrhein-Westfalen (20.3%), Baden-Württemberg (13.4%) and Niedersachsen (13.0%). The portfolio's weighted average seasoning and remaining time to maturity are 0.3 years and 22.1 years, respectively.

The main structural features are: i) initial levels of credit enhancement from subordination and cash liquidity reserve of 13.87%, 9.38%, 5.89%, 3.41%, 1.73% and 0.0% for the class A, B, C, D, E and X notes, respectively; ii) and excess spread before step-up margin of 1.0%, measured as the difference between the portfolio's yield and the weighted average cost of the rated notes' costs, hedge costs and assumed senior costs; iii) separate waterfalls during the pre-enforcement period for interest and principal, with sequential amortisation; iv) principal deficiency ledgers for the class A to F notes; v) principal redirection to cover revenue shortfalls related to senior costs (including senior hedge costs) and interest on the most senior class outstanding; vi) an interest rate swap with a banded notional entered with Citibank to mitigate the interest rate risk, as the underlying contracts pay a fixed monthly rate and the rated notes a floating monthly rate; vii) class B, C, D, E and F notes interest deferral under certain conditions to a more junior position in the related interest pre-enforcement priority of payments; and viii) a cash reserve funded at closing date from part of the proceeds from class X notes and initially covering 1.0% of class A notes' initial balance, and until the class A notes' are repaid, 1.0% of the class A notes' outstanding balance and a floor of 0.5% of the class A notes' initial balance.

The noteholders are exposed to the following key counterparties: i) Enpal and Enpal Heat GmbH as originators; ii) Enpal, Enpal Heat GmbH and EFS Deutschland GmbH as servicers; iii) Citibank Europe plc, Germany Branch, as issuer account bank; iv) Citibank Europe plc, as interest rate hedge provider; v) HmcS, Gesellschaft für Forderungsmanagement mbH, as back-up servicer; vi) MaplesFS (Luxembourg) S.A., as issuer corporate services provider; and vii) Citibank N.A., London Branch, as security trustee, cash manager and paying agent.

Figure 1. Simplified transaction diagram



Source: Transaction documentation

## 2. Macroeconomic environment and sovereign risk

The borrowers benefit from a strong macroeconomic environment in Germany. Unemployment, inflation, interest rate movements and GDP growth are the main macroeconomic variables which could affect the collateral performance associated with the private individuals backing the notes.

### 2.1 Macroeconomic indicators

We expect German unemployment to increase to 3.7% in 2025, from 3.4% in 2024 and we forecast 3.5% in 2026. The German market remains robust and significantly better than our expectation for unemployment in the euro area, at 6.4%, 6.4% and 6.2% for 2024, 2025 and 2026, respectively.

We expect German inflation to continue at low levels and to be 2.3%, 2.2% and 2.0% for 2025, 2026 and 2027, respectively. This shows a significant improvement from the high levels in 2022 and 2023 of 8.7% and 6.0%, respectively, triggered by Russia's full-scale invasion of Ukraine and the consequent rise in energy prices.

German GDP contracted by 0.7% and 0.5% in 2023 and 2024 and for 2025, 2026 and 2027 we expect a GDP growth of 0.3%, 1.0% and 1.2%, respectively.

Further support to German households, in terms of available income, shall come from expected stable euro policy rates of 2.0% for both the end of 2025 and the end of 2026 and of 1.75% for the end of 2027, lower than the 3.0% at the end of 2024.

### 2.2 Sovereign risk

Sovereign risk does not limit the instruments' ratings. The risks of an institutional framework meltdown or legal insecurity are immaterial for the ratings.

For more insight into our fundamental analysis of the Federal Republic of Germany's economy, see our [latest publication](#).

## 3. Originators and servicers

Enpal was founded in 2017, is headquartered in Berlin, Germany and is incorporated in the Netherlands. The company provides renewable energy systems and related financing to its customers. Through Enpals' end-to-end energy solutions, homeowners are offered a full service

German macroeconomic environment is supportive for private households

No constraint from sovereign risk

Young originators with experienced senior management and key staff

comprising the installation and operation of solar and battery storage systems, smart energy management and e-mobility charging solutions.

### 3.1 Business positioning

Enpal is the largest German provider of solar solutions for homeowners, with more than 100,000 customers. Enpal as of Q1 2025 is the market leader in Germany in terms of residential solar system installations and heat pump system installations with a market share of 16.0% and 3.4%, respectively.

Enpal's main service is a solar-based technology platform that addresses all the energy and e-mobility related needs of its customers, as a one-stop-shop. Enpal provides a comprehensive service from the delivery and supply of all technical equipment, up to installation and grid connection. As part of its offering, it provides an energy system to homeowners that manages the entire energy cycle, from production and storage to consumption. Customers can buy from the originators the solar system or the heat pump system through a 25- or 15-year loan, respectively.

### 3.2 Sanctioning and underwriting

Enpal since its establishment, has developed substantial expertise in originating and servicing residential solar systems and more recently heat pump systems. Enpal has at least six years of experience in managing exposures like the securitised assets, going back to 2019 and 2023 when it started originating solar lease agreements and solar loans, respectively.

Only customers who can prove property ownership, have a minimum acceptable credit quality, are not under sanction and have provided a complete set of documentation will be granted a solar loan from Enpal. The originators does not permit exceptions to the defined underwriting criteria and decisions cannot be approved based on personal judgment.

No approval exceptions, or personal decisions are permitted

At least one person listed on the loan contract must be a registered owner of the property where the solar system is to be installed. The underwriting process requires a Schufa credit score for all applicants listed in the financing contract. Only applicants who have a Schufa credit score from A to H are accepted, while those applicants with scores from I to P will be rejected. For contracts with two partners as applicants, one partner must have a Schufa score from A to H and the other partner may have a lower score from I to M. In case both partners have a score from I to P, the application will be rejected.

Reliance on customer Schufa credit score and on property ownership to mitigate default risk

The originators conducts a sanction check on all applicants, using Schufa and other external databases, to ensure compliance with international sanction regulations. Enpal, before approving the loan financing, conducts a detailed documentation verification, ensuring all key documents provided are up-to date and properly stored on its internal systems. The identification of any documents as out of date or missing will result in the application being flagged for clarification or rejection.

Before the solar loans are financed, the originators double-checks the installation quality and only solar systems which have passed the rigorous quality controls dictated internally by Enpal will be financed.

### 3.3 Servicing and recovery

Enpal's collection process is designed to ensure overdue payments are handled proactively and efficiently, in compliance with the applicable laws and maintaining a fair and customer-friendly approach.

The originators' collections and customer service department is responsible for the monitoring and handling of all collection activities. The portfolio management team is responsible for process oversight, recourse prioritisation and daily monitoring of portfolio payment behaviour.

Usually, collections are done through direct debit mandates provided by the customer at the signing of the loan. Under such direct debit mandates the customer will make monthly instalments on a fixed calendar date, until the loan's full repayment at its maturity.

The process is divided into regular collections and special collections, the latter being for accounts subject to insolvency, disputes or deceased customers.

Under the regular collection process customers are classified as low risk or high risk, based on the size of the financing amount provided and on their Schufa score at origination. There are four dunning stages (1-15 days past due, 16-30 days past due, 31-45 days past due and 46-60 days past due), which cover the different statuses of overdue payment and during which the client receives reminders through automated emails, SMS or phone calls, which increase in intensity based on the customer's identified risk profile, exposure size and level of arrears. If no miss payment is received after 61 days in arrears, the customer account is handed to an external debt collection agency for further collection actions.

Accounts which cannot be handled through the regular collection process are dealt with under the special collections process. The special collections process has at its disposal the following tools: i) forbearance measures, ii) insolvency management, iii) dispute resolution and iv) deceased handling. Customers who demonstrate financial difficulties may be eligible for payment holidays for up to six months, curing, repayment plans for up to 12 months or restructuring. For customers undergoing insolvency proceedings, Enpal will stop regular collections and will work with the related debtor insolvency administrator.

After exhausting all collection efforts without collection success, the originators may terminate the contract, through a termination notice sent to the affected customer. After termination, the terminated customer will continue to be liable for any remaining payments due to Enpal, as per the contract terms.

## 4. Portfolio characteristics

### 4.1 Securitised portfolio

The static portfolio is granular with 9,443 loans to 9,428 individual borrowers. There are no significant concentrations: the five largest borrowers in the pool account for 0.11% of the portfolio balance. The exposures are also fairly diversified in terms of German regional distribution, which reflects both German's economic centres and population density.

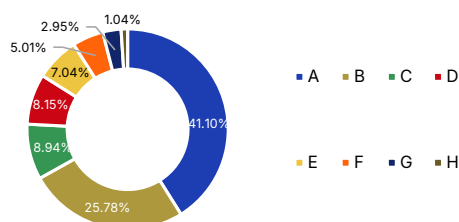
No significant portfolio concentrations

The current portfolio comprises recent origination (88.4% originated during 2025 and onwards, seasoning of 0.3 years) and has a remaining term to maturity of 22.1 years.

All the loans are classic amortising loans, which pay monthly and are fully amortising with a fixed interest rate.

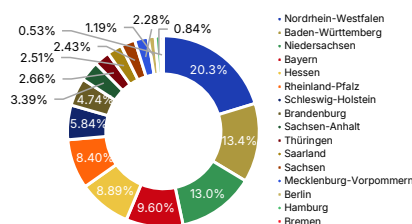
The below figures provide further details on the portfolio. See Appendix 1 for additional information.

Figure 2. Portfolio distribution by Schufa score

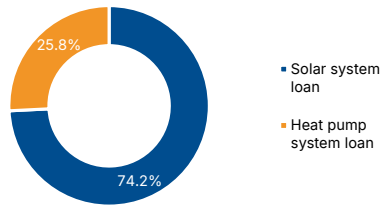


Source: Transaction data tape and Scope Ratings data aggregation

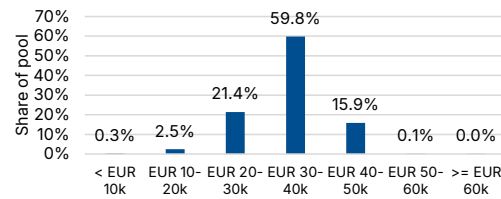
Figure 3. Pool dist. by borrower's German region



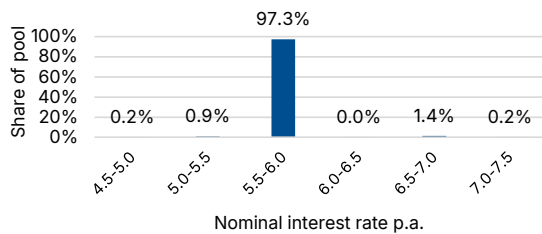
Source: Transaction data tape and Scope Ratings data aggregation

**Figure 4. Portfolio distribution by type of loan**

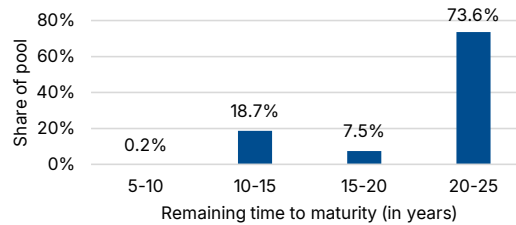
Source: Transaction data tape and Scope Ratings data aggregation

**Figure 5. Pool distribution by current balance**

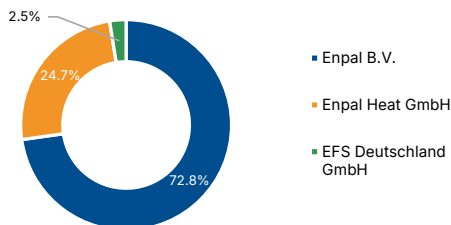
Source: Transaction data tape and Scope Ratings data aggregation

**Figure 6. Portfolio distribution by interest rate**

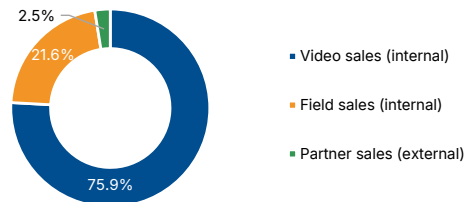
Source: Transaction data tape and Scope Ratings data aggregation

**Figure 7. Pool dist. by remaining time to maturity**

Source: Transaction data tape and Scope Ratings data aggregation

**Figure 8. Portfolio distribution by servicer**

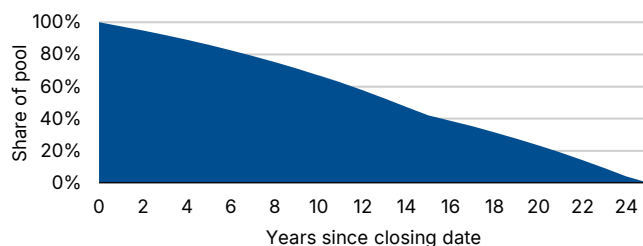
Source: Transaction data tape and Scope Ratings data aggregation

**Figure 9. Pool distribution by origination channel**

Source: Transaction data tape and Scope Ratings data aggregation

## 4.2 Amortisation profile

We have considered the amortisation profile as per the portfolio contractual run-out schedule. The considered amortisation profile is reflective of the French amortisation schedule of the loans and the portfolio's high level of granularity.

**Figure 10. Amortisation profile of the portfolio (zero defaults and zero prepayments)**

Source: Enpal's data and Scope Ratings data aggregation

## 4.3 Portfolio modelling assumptions

**Table 1: Portfolio modelling inputs**

	Portfolio
Mean lifetime default rate	3.5%
Coefficient of variation	65.0%
Base case recovery rate	30.0%
Recovery timing on defaulted assets	35% at month 12, 40% at month 18 and remaining 25% at month 24
Base case constant prepayment rate	5.0%
Senior fees and expenses	Minimum between 1.0% of non-defaulted pool principal balance outstanding and EUR 200k p.a.

Source: Scope Ratings

**4.3.1 Assets eligibility criteria**

The following tables provide a simplified description of the main eligibility criteria applied to the securitised portfolio at closing date.

**Table 2: Receivables eligibility criteria**

Risk factor	Restriction
1. Maturity	Solar purchase contract's original time to maturity being no less than 60 months and not greater than 300 months; heat pump contract's original time to maturity being no less than 60 months and no greater than 180 months;
2. Overdue status	Not delinquent by more than 30 calendar days in arrears, not defaulted; no customer has been declared insolvent, had a court grant to their creditors or has undergone a debt-restructuring process in the three years before their purchase date;
3. Payment frequency	The contract relates to equal monthly payments;
4. Payment status, fraud and installation	At least the first payment has been made by the customer;
5. Foreign exchange	Denominated in euro;
6. Interest rate	Relates to a fixed-rate contract;
7. Employee set-off/ asset transfer	The customer is not an employee or an affiliate of the seller; the receivable can be assigned, transferred and charged without customer consent; the receivable was clearly marked as transferred to the issuer on the seller's records;
8. Credit quality	At the time of contract origination, the customer's minimum Schufa score was H; the customer is registered as the owner of the related property;
9. Tax	No tax deduction or withholding tax is required in respect to the receivable; and
10. Originator	Maintained and serviced according to Enpal's credit and collection policy.

Long risk horizon up to 25 or 15 years

First payment has been made reduces fraud and installation risks

No FX risk as all issuer assets and liabilities are denominated in euro

Source: Transaction documentation

**Table 3: Purchase contract eligibility criteria**

Risk factor	Restriction
1. Origination	The contract and pre-contract information is in accordance with seller's standard credit policy and in compliance with applicable German law and regulations;
2. Origination	The contract has not been revoked, terminated or rescinded;
3. Origination	The contract is governed by German law;
4. Asset transfer	The contract relates to receivables which can be freely transferred and clear of any third-party rights over it;
5. Warranty set-off	No warranty claims have been raised by the related customer against the seller;
6. Origination	There are no claims or actions pending which could affect the contract's enforceability and collections;
7. Origination	The place of residence of the customer is in Germany, and the customer is a natural person;
8. Asset transfer/ tax	The contract does not need to be filed, recorded or enrolled with any court; no stamp, registration duty or tax is required to be paid;



9. Origination	The contract does not allow the customer to terminate it unless termination is due to serious cause; and
10. Origination	The customer is not in material breach, default or violation of any of its contractual obligations. The customer has accepted in full the contract following completion of delivery and installation of the solar or heat pump system.

Source: Transaction documentation

#### 4.3.2 Default rate analysis on portfolio

We derived our assumptions by analysing comparable transactions and default vintage data from the originators' financial leasing book, under same underwriting criteria as the securitised products, over the period from August 2019 to June 2025. Additionally, we complemented our default analysis with two Schufa default studies provided to us, related to customers statistically like Enpal's customers, based on Schufa scores and other relevant criteria. The default vintage data used in our analysis considered a default definition of '180 days past due', consistent with the transaction's definition.

We assumed that the portfolio's lifetime '180 days past due' default rate follows an inverse Gaussian distribution, with a mean rate of 3.5% and a coefficient of variation of 65.0% (Table 1). Our default rate assumption reflects a risk horizon of 25 years and 15 years associated with solar system loans and heat pump system loans, respectively (see Table 2, item 1) and the three months of pool seasoning.

We have defined as the base case a default timing scenario with a constant marginal default rate applied to the outstanding balance at each period, hence following the portfolio's scheduled amortisation.

#### 4.3.3 Recovery rate

Despite Enpal being a relatively young originator which only started originating financial leases back in September 2019, the securitised products benefit from Enpal's well established underwriting, collections and recovery process which was set up over seven years ago.

We have analysed recovery vintage data related to Enpal's financial leasing book, under the same underwriting and servicing practices as the securitised products, covering the period from August 2019 to June 2025, and comparable transactions. We derived a base case recovery rate assumption of 30.0%. We have stressed our recovery assumptions by applying rating-conditional haircuts. The low base case recovery rate, among others, is reflective of the associated complexity and high cost associated with the removal of such equipment from defaulting customers, making asset repossession typically economically a non-viable recovery option for the originators.

**Table 4: Rating-conditional recovery rates, haircuts and recovery lags**

Rating category	B	BB	BBB	A	AA	AAA	Lag (month)
Recovery rate	30.0%	27.6%	25.2%	22.8%	20.4%	18.0%	35%, 40% and 25% at months 12, 18 and 24, respectively
Recovery rate haircut	0.0%	8.0%	16.0%	24.0%	32.0%	40.0%	

Source: Scope Ratings

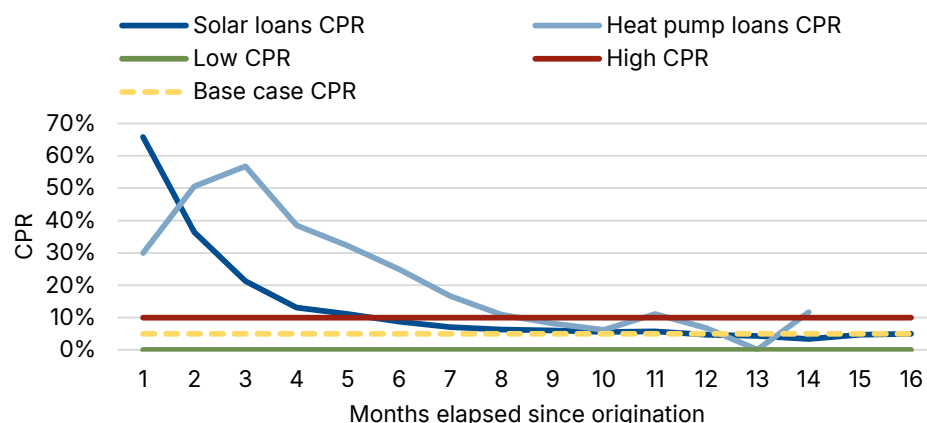
#### 4.3.4 Constant prepayment rate (CPR)

We determined a base case CPR of 5%, in line with the average CPR observed in the originators' solar and heat pump loan book historical performance, after the initial eight months since loan origination. The high prepayments, during the initial eight months since loan origination is due to customers' discretionary prepayments in part or in full after having received the related government subsidy to improve their home energy consumption. At any time during the term of

the loan, customers can repay their loans either in part or in full. There are no prepayment fees charged by Enpal in case of a borrower's partial or full loan repayment.

We also tested the structure under two additional CPR scenarios: 0% for the low prepayment scenario and 10% for the high prepayment scenario.

**Figure 11. Historical prepayment rates**



Source: Originators' dynamic prepayment data and Scope Ratings data aggregation

## 5. Financial structure

### 5.1 Capital structure

The capital structure features eight classes of notes (classes A to R). Proceeds from the class A to F notes were used at closing date to purchase a receivables pool at par value from the sellers. Proceeds from the class X notes, were used to fund the issuer's liquidity reserve initial amount and initial transaction set-up costs.

After closing date, the notes will start being repaid on a strictly sequential basis across all notes: the junior class of notes will not receive any principal until its senior class has been fully repaid. Class A, B, C, D, E and X notes will pay interest referenced monthly to one-month EURIBOR plus a margin; class F will pay a fixed rate of 0% p.a.; class R notes will receive a monthly variable return. Four years after the closing date the class A to E notes' margin will increase to its related step-up margin.

The issuer will make payments to the secured parties through the pre-enforcement split interest and principal priority of payments. In the event of issuer default, the accelerated redemption phase would start and the issuer payments to the secured parties would be made through the combined interest and principal priority of payments.

### 5.2 Liquidity reserve

At closing date, the class X noteholder will fund the issuer's amortising liquidity reserve with part of the initial proceeds from the class X notes to an amount equal to 1.0% of the class A notes' initial principal balance.

Until the start of the notes' accelerated redemption phase or the full repayment of the class A notes, its target balance will become the maximum between 1.0% of class A notes' balance outstanding and a floor amount equal to 0.5% of the class A notes' initial balance. Once class A notes are fully repaid or at the notes' legal final maturity date its target amount will become zero.

The liquidity reserve's main purpose is to provide liquidity during the pre-enforcement phase for the timely payment of senior costs, senior hedge costs and class A interest. Upon a servicer disruption event and before the step-up margin, the liquidity reserve ensures timely payment of about 3.0 monthly payment periods of assumed senior costs and class A notes' interest, assuming a stressed notes' reference rate.

Enpal will retain on an ongoing basis at least 5% of the capital structure to comply with the related securitisation regulation

Liquidity reserve provides liquidity and loss protection

Cash reserve fund is the main protection against a servicer disruption event

The initial amount of the liquidity reserve (1.0% of the class A notes initial balance) also provides credit enhancement to the rated notes, as it can pay principal shortfalls at the notes' legal final maturity date.

### 5.3 Excess spread

The rated class A, B, C, D, E and X notes benefit from excess spread available in the transaction. At closing, we estimate the available excess spread to be around 1.0% p.a., measured as the difference between the portfolio's yield and the weighted average cost of the rated notes' costs, and assumed senior costs including senior hedge costs.

Excess spread can restore the liquidity reserve to its target level. Any excess amounts over its target amount during the first four years will be released to class X and R as interest payments and principal repayments under the pre-enforcement priority of payments, after curing the class A to F PDL. Four years after closing, excess spread available after subordinated hedge costs, will be redirected as part of principal available funds.

### 5.4 Priority of payments

The structure features during the pre-enforcement phase a split interest and principal priority of payments with a principal borrowing mechanism, which materially protects the rated notes against revenue shortfalls. The pre-enforcement revenue priority of payments, through the class F, E, D, C, B and A principal deficiency ledgers (PDLs), traps excess spread to cover principal losses due to defaulted receivables in arrears by at least 180 days, any principal which has been previously redirected to cover issuer revenue shortfalls and realised losses in the portfolio which were not previously booked as defaulted receivables.

Four years after the closing date the issuer at its own discretion, may agree with the class R noteholder to resell all the purchased receivables outstanding at a price equal to the class A to X notes outstanding, plus any related due and unpaid interest and all amounts due up to the class X notes. If the issuer does not exercise such option, the class A to E notes' margins will increase to its related step-up margin. After the first optional redemption date, any remaining funds in the interest priority of payments, after subordinated hedge costs, will become part of the issuer's principal available funds, rather than being released to make payments on class R notes.

Priority of payments allows the use of both interest and principal funds to keep current on the most senior items

**Table 5: Simplified available funds and pre-and post-enforcement issuer priority of payments**

	Issuer priority of payments
Revenue available funds	<ul style="list-style-type: none"> <li>• Interest collections from the pool;</li> <li>• Recoveries on defaulted receivables;</li> <li>• Any interest earned on the issuer account banks;</li> <li>• Liquidity reserve available balance;</li> <li>• Any principal redirected funds;</li> <li>• Any amounts received under from the hedge counterparty; and</li> <li>• After notes A to F are fully repaid any remaining principal funds (see item 8 of the pre-enforcement principal priority of payments).</li> </ul>
Principal available funds	<ul style="list-style-type: none"> <li>• Principal collections from the pool;</li> <li>• Any permitted buy-back of ineligible receivables from the issuer by the seller;</li> <li>• Any principal indemnity amounts or deemed collections paid by the seller;</li> <li>• Any amounts credited into the class A, B, C, D, E and F principal deficiency ledgers; and</li> <li>• On any date after the first optional redemption date or at the notes' legal final maturity date any remaining revenue funds after subordinated hedge costs (see item 24 of the pre-enforcement interest priority of payments).</li> </ul>

	Issuer priority of payments
Pre-enforcement interest priority of payments	<p><b>Monthly payment of all issuer's revenue available funds:</b></p> <ol style="list-style-type: none"> <li>1) Taxes, senior fees and expenses (senior costs)</li> <li>2) Hedge senior costs;</li> <li>3) Class A notes' interest;</li> <li>4) Liquidity reserve up to the required amount;</li> <li>5) Class A PDL balance to be reduced to target zero;</li> <li>6) Class B notes' interest (if such class is the most senior or the class B PDL balance in debit is lower than 10% of such class balance outstanding);</li> <li>7) Class B PDL balance to be reduced to target zero;</li> <li>8) Class C interest (if such class is the most senior or class C PDL balance in debit is lower than 10% of such class balance outstanding);</li> <li>9) Class C PDL balance to be reduced to target zero;</li> <li>10) Class D interest (if such class is the most senior or class D PDL balance in debit is lower than 10% of such class balance outstanding);</li> <li>11) Class D PDL balance to be reduced to target zero;</li> <li>12) Class E interest (if such class is the most senior or class E PDL balance in debit is lower than 10% of such class balance outstanding);</li> <li>13) Class E PDL balance to be reduced to target zero;</li> <li>14) Class F notes' interest (if such class is the most senior or class F PDL balance in debit is lower than 10% of such class balance outstanding);</li> <li>15) Class F PDL balance to be reduced to target zero;</li> <li>16) Class B notes interest (if not already paid above in item 6);</li> <li>17) Class C notes interest (if not already paid above in item 8);</li> <li>18) Class D notes interest (if not already paid above in item 10);</li> <li>19) Class E notes interest (if not already paid above in item 12);</li> <li>20) Class F notes interest (if not already paid above in item 14);</li> <li>21) Class X notes interest;</li> <li>22) Repay class X notes until fully repaid;</li> <li>23) Hedge subordinated costs;</li> <li>24) After the first optional redemption date or at the notes' legal final maturity date, remaining amount redirected to principal funds;</li> <li>25) Class R notes' interest; and</li> <li>26) Remaining funds to repay class R notes' principal balance.</li> </ol>
Pre-enforcement principal priority of payments	<p><b>Monthly payment of all issuer's principal available funds:</b></p> <ol style="list-style-type: none"> <li>1) Cover any revenue shortfalls related to item 1 (senior costs), 2 (senior hedge costs), or 3 (class A notes' interest, if it's the most senior outstanding, otherwise class B, C, D E or F notes' interest once such class becomes the most senior outstanding);</li> <li>2) Class A notes' principal balance until fully repaid;</li> <li>3) Class B notes' principal balance until fully repaid;</li> <li>4) Class C notes' principal balance until fully repaid;</li> <li>5) Class D notes' principal balance until fully repaid;</li> <li>6) Class E notes' principal balance until fully repaid;</li> <li>7) Class F notes' principal balance until fully repaid; and</li> <li>8) Any remaining funds to the pre-enforcement revenue waterfall.</li> </ol>
Post-enforcement combined priority of payments	<p>The post-enforcement priority of payments is triggered by an issuer event of default, among others, the issuer's non-payment of timely interest on the most senior class of notes' outstanding or the non-payment of principal in any of the class A to X notes at the notes' legal final maturity date.</p> <p><b>Monthly application of all issuer's revenue and principal available funds:</b></p> <ol style="list-style-type: none"> <li>1) Taxes, senior fees and expenses;</li> <li>2) Senior hedge costs;</li> <li>3) Class A notes' interest;</li> <li>4) Class A principal balance until fully repaid;</li> <li>5) Class B notes' interest;</li> <li>6) Class B principal balance until fully repaid;</li> <li>7) Class C notes' interest;</li> <li>8) Class C principal balance until fully repaid;</li> <li>9) Class D notes' interest;</li> <li>10) Class D principal balance until fully repaid;</li> <li>11) Class E notes' interest;</li> <li>12) Class E principal balance until fully repaid;</li> <li>13) Class F notes' interest;</li> <li>14) Class F principal balance until fully repaid;</li> <li>15) Class X notes' interest;</li> <li>16) Class X principal balance until fully repaid;</li> <li>17) Subordinated hedge costs;</li> <li>18) Class R interest; and</li> <li>19) Remaining funds to class R principal balance.</li> </ol>

Source: Transaction documents and Scope Ratings

## 5.5 Principal redirection

During the pre-enforcement phase after first exhausting all the issuer's available revenue funds, if there is still a revenue shortfall related to senior costs, senior hedge costs and interest on the most senior class outstanding across the class A to F notes, then all available principal funds can be used to cure such revenue shortfalls.

The borrowing of principal funds to be part of interest funds occurs under item 1 of the pre-enforcement principal waterfall. Any borrowed principal amounts will be recorded on the class F to A PDL, from the most junior PDL (class F PDL) to the most senior PDL (class A PDL) up to its related class outstanding principal balance.

## 5.6 Default and delinquent definitions

The structure establishes definitions of default and delinquency, which allows the efficient use of available excess spread. The definitions match the originators' practices and allow the timely management of asset credit events during servicing and monitoring.

Transaction eligibility criteria applicable to the closing pool prevent the inclusion of delinquent assets (see Table 2, item 2). Delinquent assets are non-defaulted assets for which a loan instalment is due for more than 30 days from its due date for an amount greater than EUR 30.

The transaction defines a defaulted asset when the related receivable was: i) handed back or repossessed; ii) in arrears for more than 180 days for an amount greater than EUR 30; iii) related to a customer who is insolvent or bankrupt; or iv) determined by the servicer as uncollectable, or partially written off.

## 5.7 Interest rate risk

All the loans are fixed-rate, while classes A, B, C, D, E and X pay floating rates referenced to one-month EURIBOR, leading to fixed-floating interest rate risk. This risk is mitigated through an interest rate swap agreement.

Under the interest rate swap agreement, the hedged swap notional balance is banded, where its notional is be equal to the portfolio performing principal balance if it falls between predefined low and high notional amounts. Should the portfolio performing principal balance fall outside of the predefined bands, then such hedged swap notional will be equal to the related predefined low or high notional amount. Under the interest rate swap agreement, the issuer will pay to the hedge provider (Citibank), monthly a fixed amount equal to the fixed-rate of 2.76% per annum and will receive in return a floating amount equal to the applicable one-month EURIBOR, both based on the banded hedged notional balance. The floating amount will not be floored at 0%; hence if the one-month EURIBOR becomes negative, the issuer will have to pay to the hedge provider not only the fixed amount, but also the floating amount associated with the negative one-month EURIBOR. The interest rate swap agreement will be terminated 25 years after closing date.

## 5.8 Issuer accounts

The issuer will hold all its accounts with Citibank, while the servicer collection accounts are held with Deutsch Bank AG and Commerzbank Aktiengesellschaft. The issuer accounts include: i) the transaction account bank, ii) the liquidity reserve account and iii) the hedging collateral account. The issuer accounts are all subject to downgrade and replacement language upon loss of a minimum long-term rating or short-term rating. The servicer collection accounts are subject to an account bank pledge agreement for the ultimate benefit of the secured parties, including the noteholders.

We deem the issuer account bank's counterparty risk immaterial, based on the replacement provisions alongside the high credit quality of Citibank.

## 5.9 Clean-up call

The issuer may agree with the sellers the repurchase of all outstanding receivables. The call option can be exercised once the portfolio outstanding principal balance is less than 10% of the principal of class A to F notes' as of closing date. If this call option is exercised, the repurchased price must

Our analysis gives no credit to the sellers' discretionary call option

be sufficient to redeem in full all the outstanding class A to X notes, to pay accrued and unpaid due interest on such class of notes and to pay all liabilities ranking senior or equal to the class X notes.

Our analysis disregards this call option.

## 6. Rating sensitivity

We have tested for deviations in the main input parameters: i) the mean default rate; and ii) the base case recovery rate. This analysis has the sole purpose of illustrating the sensitivity of the ratings to input assumptions and is not indicative of expected or likely scenarios.

**Table 6: Sensitivity analysis results**

Debt instrument	50% increase of mean lifetime default rate	50% decrease of recovery rates
<b>Class A</b>	Zero notches	Zero notches
<b>Class B</b>	Zero notches	Zero notches
<b>Class C</b>	Zero notches	Zero notches
<b>Class D</b>	Zero notches	Zero notches
<b>Class E</b>	Zero notches	Zero notches
<b>Class X</b>	Two notches	One notch

Source: Scope Ratings

## 7. Counterparty risk

The transaction's counterparty risk supports the rated instruments' ratings. We do not consider any counterparty exposure to be excessive. The limited-in-time financial exposures, the credit quality of the counterparties, and the issuer account bank downgrade and replacement mechanism support the rated instruments. The counterparty roles performed by the servicers and the issuer account bank (Citibank) are considered material, before considering the available mitigants. The transaction's downgrade and replacement language and the related remedy period over the issuer account bank are effective at mitigating the transaction's counterparty risk, with the remaining risk being considered immaterial. Despite the servicers not being rated entities, servicer disruption risk is mitigated by the presence of servicer termination events, the issuer liquidity reserve and the appointment of the back-up servicer (HmcS) at closing date.

### 7.1 Commingling risk from servicers

We consider the transaction's cash-commingling risk immaterial. The transaction benefits from the following cash-commingling risk mitigants, by order of relevance: i) cash sweeps within two business days from the three servicer collection account banks into the issuer account bank; ii) three pledges over the servicer collection accounts for the ultimate benefit of noteholders to be registered by closing date; iii) the appointment at closing date of HmcS as back-up servicer; and iv) the swift and clear borrower notification process upon a servicer termination event and the redirection of pool collections into the issuer back-up servicer collection account.

In the absence of a servicer termination event, collections from borrowers are paid into the three servicer collection bank accounts two held with Deutsche Bank AG and one held with Commerzbank Aktiengesellschaft. All monies sitting on the servicer collection bank accounts are then swept within two business days to the issuer account bank held with Citibank. In the event of a servicer termination, debtors would be notified to pay directly into the issuer back-up servicer collection account.

The servicer collection account pledges in favour of the issuer, will give the issuer a priority on the proceeds sitting on the servicer collection account over all other creditors of the servicer, including a scenario of servicer insolvency.

We consider cash-commingling risk to be immaterial, after considering the available mitigants

## 7.2 Set-off risk from originators

There is no deposit set-off risk in this transaction as the originators are not deposit-taking institutions.

Set-off risk considered immaterial

The originators and the solar or heat pump system maintenance provider (Enpal Services GmbH), in case such services are provided by Enpal, are two different legal entities. Therefore, under German law, debtors will not be able to set off their maintenance claims against the monies owed to the related originator under the loan agreement to be purchased by the issuer. The same scenario would apply in case debtors require their solar or heat pump systems to be credit insured by Enpal. In such cases the insurance provider under their insurance agreements will be Enpal Services GmbH, a different legal entity than the related originator, eliminating insurance set-off risk.

During the first five years since the installation of the solar or heat pump system the originators provide an installation warranty. There is the risk, if originators go insolvent during the initial five years since installation, that borrowers could try to set off their payment obligations under the loans against the lost five-year warranty during which an installation problem occurred. As explained by Enpal, if a fault stems from improper installation, it will likely show up in the first months after installation, so the probability of a later issue being tied to incorrect installation is extremely low. In case of component failure, the customer can claim it directly under the manufacturer's warranty, which is assigned to the customer from day one. Therefore, we conclude that installation warranty set-off risk in the context of the transaction is very remote and considered immaterial.

## 8. Legal structure

### 8.1 Legal framework

The transaction represents a sale of German loan receivables to a Luxembourg special purpose vehicle (SPV). The issuer's sole shareholder (Stichting 450 Funding) is a Dutch stichting foundation, which is commonly used in securitisation transactions that use an SPV located in Luxembourg, due to such SPVs' its orphan nature and possibility to separate economic interests and control over an asset.

We considered the issuer a bankruptcy-remote SPV

This securitisation is governed by four different legal regimes. The receivables are originated and were transferred to the issuer under German law. The issuer is incorporated in Luxembourg. The swap documents and the security assignment deed are governed under English law. One seller, Enpal B.V, is located and registered in the Netherlands, which is under Dutch law, while the other seller (Enpal Heat GmbH) is located and registered in Germany, under German law.

### 8.2 Use of legal and tax opinions

We reviewed the German, Luxembourg, English and Dutch legal opinions, covering also tax matters for the issuer, produced by a reputable law firm with significant experience in international securitisation matters. These provide comfort on the issuer's legal and tax structure and support our general legal analytical assumptions.

Issuer's ongoing tax costs are considered immaterial and well covered under our stressed senior costs assumption

The issuer is based in Luxembourg, established as a public limited liability securitisation company (société de titrisation), and subject to the Luxembourg securitisation laws. The issuer has the authority to enter the transaction documents, exercise and perform its obligations, and issue notes. The issuer's obligations under a Luxembourg court would be recognised as legal, valid and binding in accordance with the transaction documents. Transaction documents governed by the German and English laws would be recognised by the courts in Luxembourg, where the issuer is located.

Only immaterial tax amounts remain a cost to the transaction, i.e. i) a small corporate tax amount (net wealth tax), and ii) value-added tax in the context of the issuer-contracted legal and tax advisory services.

## 9. Monitoring

We will monitor this transaction based on the transaction's performance reports, as well as other available information. The ratings will be monitored continuously and reviewed at least once a year, or earlier if warranted by events.

Scope analysts are available to discuss all the details surrounding the rating analysis

Scope analysts are available to discuss all the details surrounding the rating analysis, the risks to which this transaction is exposed and the ongoing monitoring of the transaction.

## 10. Applied methodology and data adequacy

We analysed this transaction using our Consumer and Auto ABS Rating Methodology dated March 2025, our General Structured Finance Rating Methodology dated February 2025, and our Counterparty Risk Methodology dated June 2025. All are available on our website, [scoperatings.com](https://scoperatings.com).

We considered the information and data provided to us complete, sufficient, and satisfactory

Enpal provided us with monthly data on origination volumes, delinquencies, defaults, recoveries, net defaults and prepayments relating to the originators' eligible book products securitised. The data related to the originators' solar system loan book and heat pump system loan book, covering the period from June 2023 to July 2025 and from May 2024 to July 2025, respectively. The default data was segmented by monthly vintage of origination, referring to a '180 days past due' default definition See Appendix 2 for more details.

Additionally, we received origination-volume, default, recovery and net default vintage data from the originators' financial lease book covering the period from August 2019 to June 2025, related to the entire book and segmented by Schufa score. We also received two default studies produced by Schufa (Schufa default study 1 and Schufa default study 2 covering the period from June 2018 to June 2025 and from June 2020 to June 2025, respectively). Finally, we received detailed line-by-line portfolio data tape and portfolio stratification tables with a cut-off date of 31 October 2025.



## Appendix 1. Summary of portfolio characteristics

The table below shows the closing portfolio characteristics as of the cut-off date of 31 October 2025.

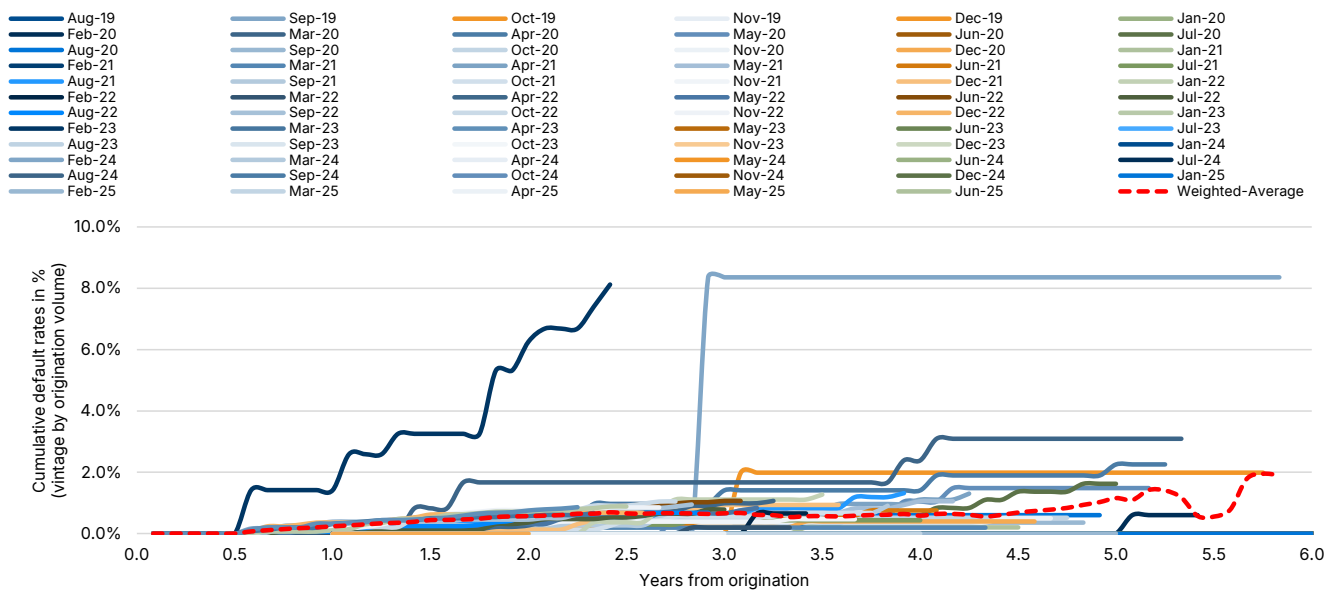
Key features	Portfolio
Portfolio original principal balance (EUR m)	317.0
Portfolio current principal balance (EUR m)	302.9
Number of loans	9,443
Number of borrowers	9,428
Average original balance (EUR)	33,571
Average outstanding balance (EUR)	32,081
Largest outstanding balance (EUR)	72,500
Solar system loan exposure*	74.2%
Heat pump system loan exposure*	25.8%
Schufa score A, B and C exposure*	75.8%
Top 3 geographical concentrations by debtor region of residence (%)*	Nordrhein-Westfalen (20.3%), Baden-Württemberg (13.4%) and Niedersachsen (13.0%)
Weighted average interest rate**	6.0%
Weighted average remaining term (months)**	265
Weighted average seasoning (months)**	3
Weighted average life (months)**	162
<p>*As a percentage of the current outstanding principal balance, as of cut-off date 31 October 2025.  **Weighted by the current outstanding principal balance.  Source: Transaction data tape and Scope Ratings data aggregation</p>	

## Appendix 2. Vintage data provided by the originators

Enpal provided 180 days past due (d.p.d.) default and recovery performance data relating to the originators' eligible products securitised (solar system loans and heat pump system loans) and related to its financial lease book, under the same underwriting as the securitised products. The financial lease book, in comparison with the securitised products book, benefits from a longer performance history, as solar system loans and heat pump system loans only started being originated from June 2023 and May 2024, respectively.

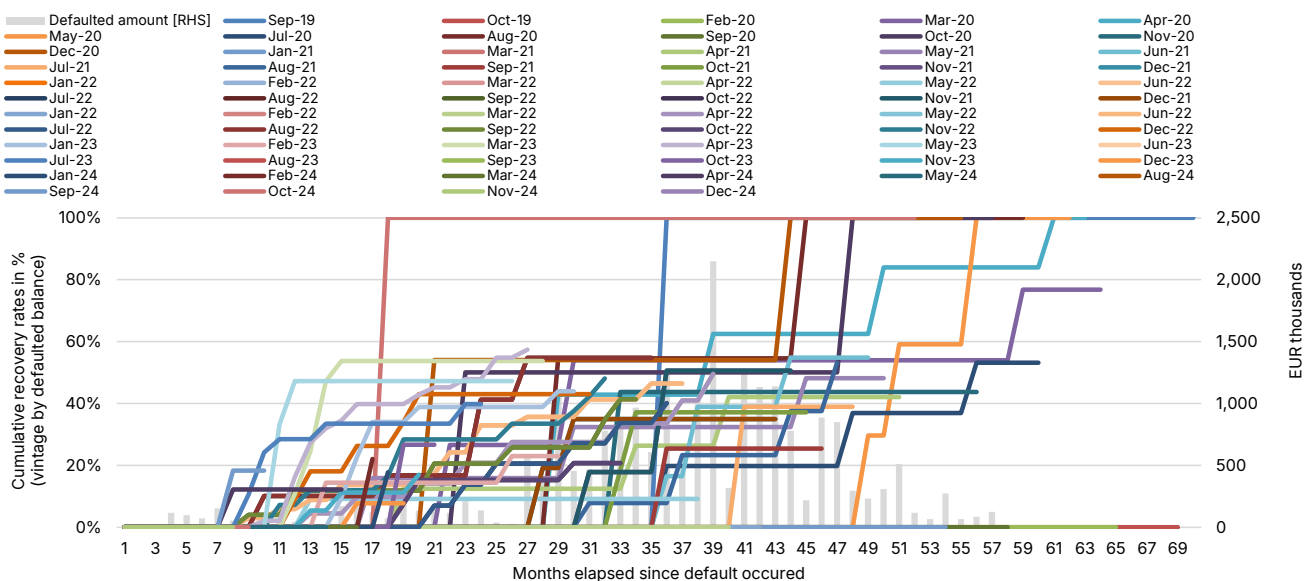
We considered the information in our analysis as the foundation for the calibration of the mean default rate and coefficient of variation, which define the inverse Gaussian lifetime default rate distribution, and the base case recovery rate. We considered the quality of information available to us to be satisfactory.

**Figure 12. Financial lease book – 180 d.p.d. default vintage data presented by Enpal**



Source: Originators' vintage data

**Figure 13. Financial lease book – 180 d.p.d. recovery vintage data presented by Enpal**



Source: Originators' vintage data

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**Applied methodologies**

[Consumer and Auto ABS Rating Methodology](#), March 2025

[General Structured Finance Rating Methodology](#), February 2025

[Counterparty Risk Methodology](#), July 2024

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