

Shelby Real Estate Funding Ltd

Commercial real estate mortgage loans



Scope
Ratings

Ratings

Note class	Rating	Notional (GBP m)	Notional (% assets)	CE (% assets)	Coupon	Final maturity
Class A notes (ISIN XS2537092350)	AAA _{SF}	2,450.0	70.0	30.0	Compounded daily SONIA + 1.5%	14 Nov 2039
Class B notes (ISIN XS2537093838)	AA _{-SF}	525.0	15.0	15.0	Compounded daily SONIA + 2.5%	14 Nov 2039
Class C notes (ISIN XS2537463601)	NR	525.0	15.0	0.0	Portfolio excess spread	14 Nov 2039
Rated notes		2,975.0				

Scope's quantitative analysis is based on the provisional portfolio dated 07 November 2022. 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 [SF Rating Definitions](#).

Transaction details

Purpose	Liquidity or funding
Issuer	Shelby Real Estate Funding Limited (Shelby)
Originator/ vendor/ vendor trustee/collateral manager/ servicer collection account bank/ liquidity provider/ initial purchaser/ retention holder	Barclays Bank PLC (Barclays)
Issuer account bank/ agent bank/ principal paying agent/ registrar	Elavon Financial Services DAC, UK Branch (Elavon)
Collateral administrator	U.S. Bank Global Corporate Trust Limited
Trustee	U.S. Bank Trustees Limited
Corporate services provider	Intertrust Management Limited
Closing date	12 December 2022
Payment frequency	Quarterly, 14 February, 14 May, 14 August and 14 November

Shelby Real Estate Funding Limited is a cash securitisation of a portfolio composed of CRE (commercial real estate) mortgage loans originated in the UK in the ordinary course of business by Barclays Bank PLC. The proceeds from the notes will be used to acquire from the vendor the beneficial interest over the portfolio. The principal and interest proceeds collected from the portfolio will be used, among others, to repay the notes outstanding as per the applicable transaction priority of payments.

Rating rationale (summary)

The ratings reflect the legal and financial structure of the transaction; the credit quality of the underlying portfolio and its management criteria in the context of the macroeconomic conditions in the United Kingdom; and the ability and incentives of Barclays as loan originator and collateral manager of the loan portfolio.

Following the UK's exit from the European Union, the Covid-19 pandemic, and the Russia Ukraine war the United Kingdom's large, wealthy and diversified economy proved resilient. Following the recent significant political turmoil, the UK's institutional strengths were instrumental in ensuring a smooth transition of power and to ease tensions in financial markets. However, the UK's economic outlook is set to worsen as high inflation, weaker external demand, and tighter financial conditions weigh adversely on economic activity. After robust growth in 2022 of around 4.4%, we expect the UK's economy to contract by 0.6% in 2023 and only rebound gradually towards its medium-term growth potential of around 1.5%.

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Related Research

General Structured Finance
Rating Methodology,
December 2021

CRE Loan and CMBS Rating
Methodology,
October 2022

Counterparty Risk Methodology,
July 2022

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The ratings account for the respective credit enhancements of the rated notes (class A and B) and the strictly sequential amortisation of all three classes of notes from the CRE mortgage loan portfolio, whose maximum weighted average maturity date is the earlier of five years since the last measurement date and the payment date in November 2029. The ratings also reflect the default risk and recoveries upon default of the revolving portfolio. Our analysis incorporates the transaction's mitigants against adverse portfolio migration during the reinvestment period, scheduled to end in November 2024, as well as the loan eligibility criteria, collateral quality and portfolio profile tests and the excess spread reserve test.

The ratings address exposures to the key transaction counterparties: i) Barclays as collateral manager, vendor, vendor trustee, servicer collection account bank, liquidity facility provider, initial purchaser and retention holder; ii) Elavon as issuer account bank, agent bank, principal paying agent and registrar; iii) U.S. Bank Global Corporate Trust Limited as collateral administrator; and iv) U.S. Bank Trustees Limited as trustee. Counterparty risks to the transaction's material counterparty roles are mitigated by: i) the credit quality of Barclays and Elavon; and ii) the replacement mechanism attached to their roles of issuer account bank and liquidity facility provider upon loss of a BBB or S-2 rating within 30 calendar days since loss of the minimum required ratings. Scope has a subscription rating on Barclays and has analysed the credit quality of Elavon based on public ratings.

Rating drivers and mitigants

Positive rating drivers

Credit enhancement. The rated class A and B notes benefit from credit support of respectively 30% and 15% provided by the notes' subordination.

Excess spread reserve test. This curable test only applicable during the reinvestment period helps to maintain the proper collateralisation of the class A notes with non-defaulted collateral. Upon a breach of the test, any excess of issuer interest funds after class B interest will be redirected into the issuer principal account for the purchase of new assets.

Liquidity protection. A non-amortised liquidity facility mitigates liquidity risk in the event of a collateral management disruption. Among others, further mitigation comes from a possible redirection of issuer principal funds to cover any interest shortfall related to senior costs and class A and B notes interest due.

Low LTV (loan-to-value). The current pool weighted average LTV (45.4%) provides noteholders an adequate level of protection against a possible market value downturn.

Granular CRE portfolio. The CRE mortgage loan portfolio is made of 89 loans related to 4,297 properties and 13,961 tenants/units. The top debtor group accounts for around 5% of the total pool by current principal balance. This feature protects the portfolio's performance against idiosyncratic borrower credit risk and ensures stable cash flows.

Experienced corporate lender. The loans are part of the core origination activity of Barclays, whose record in domestic corporate lending spans more than a century, with a focus on lending to large corporates.

Upside rating-change drivers

Increased credit enhancement from deleveraging accompanied by good portfolio performance may result in a class B notes upgrade.

Negative rating drivers and mitigants

Portfolio refinancing risk. All commercial real estate loans are exposed to refinancing risk, which will be further aggravated if interest rates continue to rise.

Pool concentration to the UK. The portfolio is entirely located in the UK, increasing the transaction's concentration risk to the UK economy and to its property market value. We believe this risk is mitigated to a degree due to the pool's low LTV and the UK's large, wealthy and diversified economy, reflected in the sovereign's rating of AA/Stable by Scope.

Credit risk profile migration. Under certain conditions the transaction could be revolving for up to two years. Associated risks related to the replenishment of new loans are mitigated mostly through eligibility criteria, portfolio profile tests, collateral quality tests, an excess spread reserve test and stop reinvestment triggers. All are designed to ensure a minimum portfolio credit quality at the start of the amortisation phase.

Counterparty concentration risk. Barclays performs numerous transaction roles such as originator, collateral manager, liquidity facility provider, vendor, vendor trustee, servicer collection account bank, initial purchaser and retention holder. This risk is mostly mitigated by Barclays' credit quality and, in terms of its material role as liquidity facility provider and issuer account bank, by the downgrade and replacement language upon loss of BBB or S-2 rating within 30 calendar days.

Downside rating-change drivers

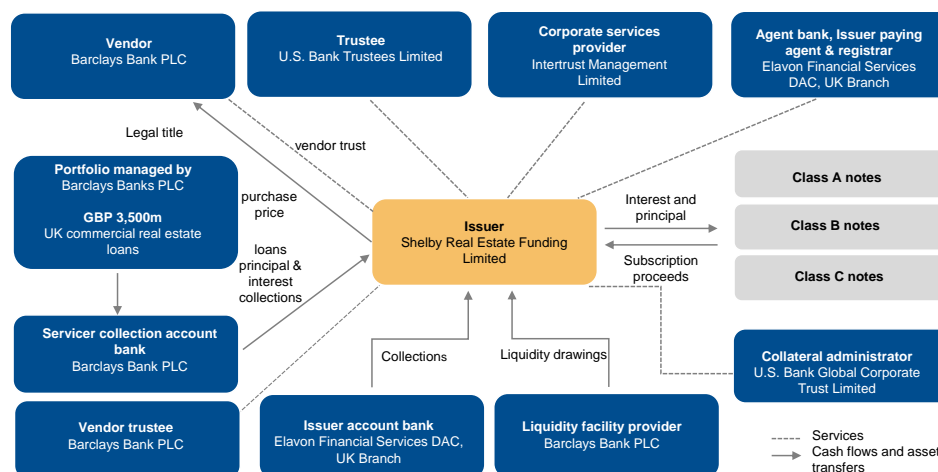
A worse-than-expected default and recovery performance of the assets may result in a downgrade of the rated notes.

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1. Transaction summary

Figure 1: Simplified transaction structure:



Source: Transaction documents and Scope

1.1. Key transaction features

Below is a short summary of the main transaction features:

- The CRE mortgage loan portfolio denominated in GBP collateralises the class A, B and C notes also denominated in GBP.
- The collateralisation of the rated class A and B notes with excess principal and excess spread. The rated class A and B notes' credit support from subordination at closing will be 30% and 15%, respectively.
- During the revolving period, the excess spread reserve test ensures the class A 30% of credit support from subordination. If breached it will prevent the leakage of any issuer excess of interest funds into the class C noteholders (Barclays).
- Non-amortising liquidity facility of GBP 140m
- Portfolio profile tests ensure a minimum collateral credit quality throughout the revolving phase or at the start of the amortisation phase. These tests aim to prevent the increase of the portfolio concentration risk related to: i) loan or debtor size; ii) the timing of repayment of pool cash flows; iii) property areas; and iv) property type.
- Like the portfolio profile tests, the collateral quality tests are also designed to preserve collateral credit quality during the revolving phase. Such tests will ensure at the start of the amortisation phase: i) a minimum pool weighted average excess spread of 1.75% p.a.; ii) a maximum weighted average loan to value of 55%; and iii) a maximum pool weighted average remaining maturity of five years.
- The rules-based reinvestment of prepayments scheduled to end on the payment date in November 2024 (around two years from the closing date).
- Stop reinvestment period triggers related to cumulative losses plus the loans' principal balance in arrears for more than 90 days exceeding 4% of the closing pool's principal balance or once Barclays is no longer the collateral manager.



Originator with decades-long knowledge and expertise in the UK real estate market

Barclays' interests well aligned with those of noteholders

Proper involvement of business and risk in sanctioning process

Effective loan underwriting with appropriate balance between commercial and credit risk functions

2. Originator and seller

Barclays is an international bank headquartered in the UK and founded in London in 1690. All CRE loans in the securitised portfolio come from Barclays' corporate banking division. The originator is the first UK bank to provide a dedicated real estate team consisting of over 120 relationship and support staff. The real estate team provides bespoke debt financing solutions to over 700 clients across the UK market.

The originator has significant experience in originating and servicing the transaction assets originated in the UK, mostly to UK borrowers. Barclays has the knowledge, skills, systems and resources to perform the contemplated transaction roles (as vendor collateral manager, collateral manager, servicer and liquidity facility provider). Barclays' ability to perform these transaction roles is further strengthened by its regulation by the Bank of England and its long experience with UK CRE assets.

2.1. Business positioning

We believe that this transaction is consistent with Barclays' strategy of: i) managing its balance sheet and costs; ii) improving return on capital; iii) increasing lending where returns justify it; and iv) investing in key franchises, such as Barclaycard, to improve earnings.

We believe Barclays' interests are aligned with those of the noteholders. In a scenario in which the transaction does not perform satisfactorily, Barclays' future access to external sources of funding could be impacted.

2.2. Sanctioning and underwriting

2.2.1 Loan origination and underwriting process

All Barclays' corporate banking debt is subject to a dual-track sanctioning process (commercial and credit risk) that evaluates the risk-reward dynamics at deal inception. All deals are also subject to ongoing monitoring throughout their life.

The CRE loans securitised have been subject to Barclays' large corporate credit model. At high level, loan origination, execution and monitoring is reliant on: i) initial loan screening and vetting; ii) capital approval; iii) credit approval; iv) loan operations; v) structuring and transaction management; and vi) real estate asset management.

The credit risk sanctioning process starts with the analysis of the client's request from the front office and a credit report is prepared. This credit report includes an assessment of the borrower, assets, tenant, funding type, funding limits, key risks and mitigants.

The loans must also pass through a commercial approval framework based on the loan size, which runs in parallel to the credit risk sanctioning process. Financing facilities lower than GBP 50m from a business perspective can be self-approved only by the origination or price team, while larger deals are discussed at the lending commitments committee.

We consider the workflows for sanctioning and executing the corporate banking channel's credit applications to be effective and to limit credit risk in accordance with the bank's risk appetite. Barclays ensures compliance with this risk appetite by always involving the credit risk department at the beginning of the sanctioning process and at final execution. The processes do not differ significantly from standard processes at comparable banks, and they involve the proper segmentation of sanctioning authority as well as the separation of business and risk-review powers.

Credit approval involves three stages: i) pre-screening; ii) detailed analysis; and iii) final approval following due-diligence output and finalisation of loan terms.

Appropriate credit risk models, systems and methodologies to assess initial and ongoing portfolio credit risks

2.2.2 Risk models

Barclays employs standard market risk assessment tools which incorporate external ratings and obligor-specific information (financial and non-financial). Through-The-Cycle Default Grade (TTC DG) is the bank's credit scoring system scaled from 1 to 23, in sequential order from the lowest probability of default to non-performing. From a regulatory point of view, Barclay's risk models conform to the advance rating-based approach. Credit expert judgement is for Barclays the most relevant source for defining the probability of default over the next year.

2.2.3 Servicing and recovery

We consider Barclays' loan servicing and management of non-performing loans to meet the highest European banking standards. Its approach is proactive and diligent, driven by the aim of maintaining a close relationship with the obligor.

Barclays' servicing and recovery strategy is consistent with its business model, which focuses on maintaining a close relationship with its core clients to recognise and tackle any potential adverse developments at an early stage.

We believe that Barclays' recovery strategy suits the sophisticated relationship between the bank and its corporate obligors. The recovery function is performed by its special asset management unit. The approach is cooperative, with the aim of identifying solutions that would help a stressed or distressed obligor become performing again. The core elements are restructuring and cooperation throughout the work-out process. Barclays would only seek a managed exit or liquidation if a cure is not possible.

During monitoring, Barclays maintains an early-warning list identifying potential problem loans. Additionally, Barclays' TTC DG of exposures on the early-warning list may be adjusted downwards for a more conservative analytical approach.

3. Asset analysis

The underlying pool will comprise a portfolio of CRE mortgage loans from Barclays' own balance sheet. The portfolio may alter during the 2-year revolving period. We expect the general risk profile to either remain the same or deteriorate to the portfolio profile limits and credit quality test levels due to the portfolio management criteria.

3.1. Provisional pool

The composition of the final portfolio will be different from the provisional portfolio, mostly due to the repayment of loans in between the closing date and the provisional portfolio cut-off date and the removal of any loans which do not comply with the loan eligibility criteria as at the closing date. Any difference between the closing notes' principal balance and the closing portfolio principal balance, corresponds to Issuer cash held at the issuer principal account, for the purpose of acquiring additional eligible loans.

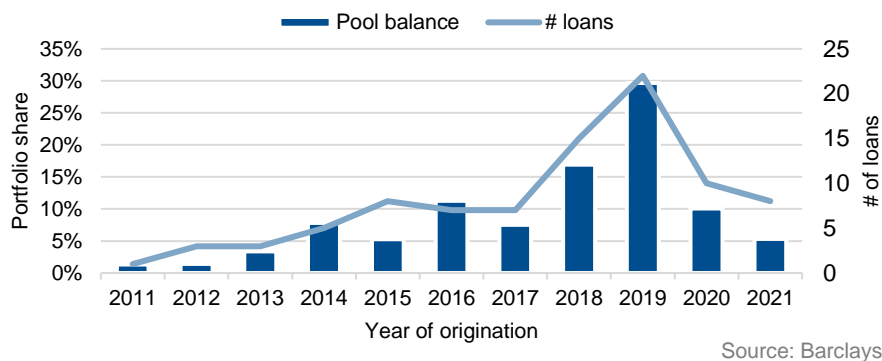
The closing portfolio, with cut-off date on 7 November 2022, comprises 89 loans related to 4,297 properties and 13,961 tenants/units. All loans were originated in the UK to borrowers mostly located in the UK (99.7% of the total pool by principal balance or related to 88 loans) and denominated in GBP.

The average loan size is GBP 32.2m. The average number of properties per loan is 48. The average number of tenants per loan is 157.

Top one, 10 and 50 group obligors represent around 5%, 36% and 89% of the portfolio, respectively. The pool is well seasoned (weighted average seasoning of 4.8 years) and with a short pool remaining time to maturity (1.5 years).

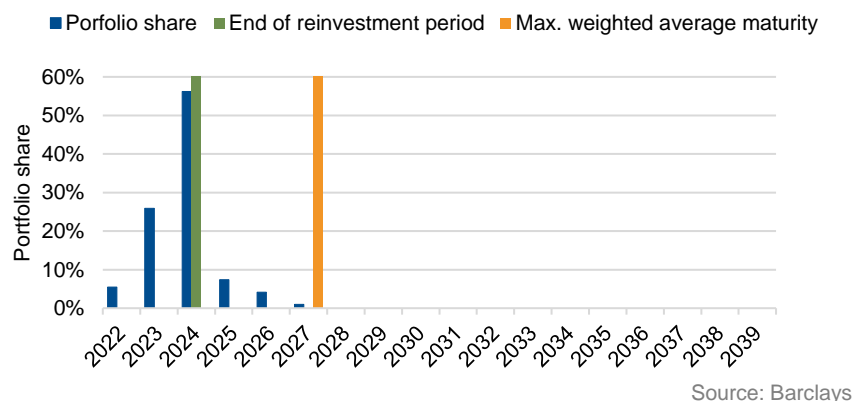
High standard of proactive servicing and recovery

Figure 2: Portfolio distribution by loan origination year



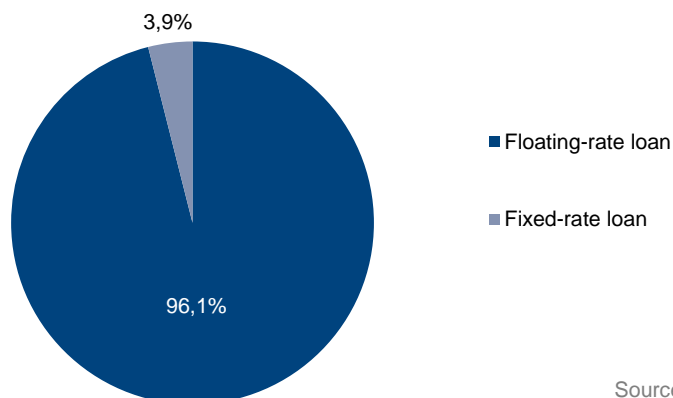
Around 64% of the current portfolio consists of bullet loans. The entire provisional pool is expected to mature by January 2027 and the portfolio weighted average maturity is in April 2024.

Figure 3: Portfolio maturity profiles



Most of the loans in the pool are floating-rate loans (96.1%), leaving its borrowers exposed to a possible rise in interest rates and consequent increase in their financing costs. The following transaction features are the main mitigants to these risks faced by the borrowers: i) around 51% of the floating-rate loans have an interest rate hedge; ii) most of the loans have their underlying rents linked to CPI (consumer price index); and iii) the portfolio's high ICR (interest coverage ratio), with a weighted average of 4.0x. The portfolio has a weighted average nominal interest rate of 2.8% and most of the floating-rate loans are linked to SONIA rate (88.9%).

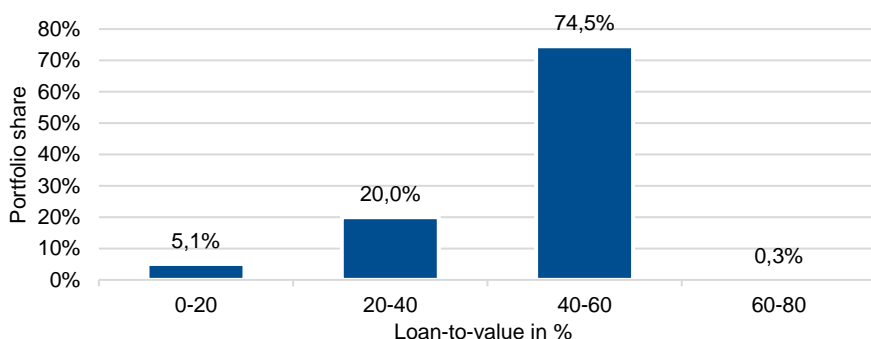
Figure 4: Portfolio distribution by loan type of interest rate



Source: Barclays

The portfolio's current weighted average LTV is 45.4%, which is low and therefore credit-positive for the transaction.

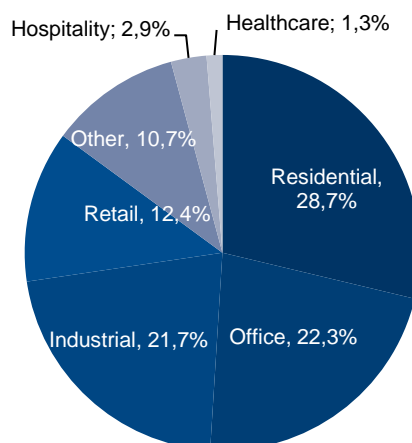
Figure 5: Portfolio distribution by current loan-to-value



Source: Barclays

The portfolio is well diversified by property type. We identify seven property types based on our simplified mapping of Barclays' classifications. Of these, the top three property types are residential (28.7%), offices (22.3%) and industrial (21.7%).

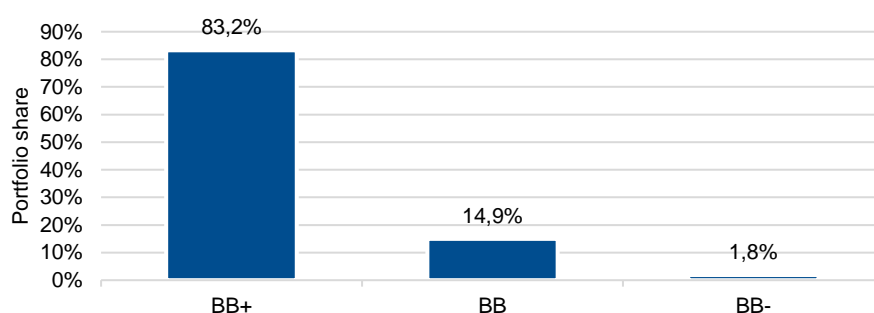
Figure 6: Portfolio distribution by property type (under Scope mapping)



Source: Barclays

The current portfolio has a weighted average default risk commensurate with a BB+ rating, based on a mapping of Barclays' default grades for the portfolio loans to our ratings. The pool's weighted average default risk of BB+ is based on an extended weighted average maturity of the pool to seven years.

Figure 7: Portfolio credit quality as per our assessment (probability of default)



Source: Barclays

3.2. Reinvestments and portfolio management criteria

3.2.1 Loan eligibility criteria

Each time the issuer acquires a beneficial interest in a loan at closing date or during the replenishment period, each purchased loan must satisfy eligibility criteria. Figure 8 contains some of the criteria.

Figure 8: Simplified loan eligibility criteria

1)	Senior loan originated or acquired in accordance with Barclays' CRE lending criteria.
2)	The borrower and each related loan are secured by a commercial or residential investment property and subject to internal rating-based slotting methodology.

3)	The loan currency is in GBP.
4)	Borrowers are secured by CRE properties located in the UK.
5)	At the time of acquisition of the beneficial interest in the loan, such a loan is not: i) a security with payments subject to withholding tax; ii) a Barclays obligation; iii) a Libor referencing obligation; iv) a credit impaired loan or defaulted loan; v) a convertible security; vi) an asset-backed security; or vii) a payment-in-kind loan
6)	A declaration of trust over the beneficial interest in the loan is possible without breaching selling restrictions or contractual provisions.
7)	The loan matures five years before the notes' legal final maturity.
8)	The loan has a slotting category of strong or good.
9)	The loan's margin is at least 0.25% a year.
10)	The loan's LTV is less than 70%.
11)	Either than in respect of payments pursuant to any hedging arrangement, it does not allow the borrower to exercise any set-off rights in respect of the loan.

3.2.2 Reinvestment criteria

During the 2-year scheduled revolving period, the collateral manager (Barclays) can reinvest portfolio collection proceeds into new loans as long as: i) no note event of default has occurred and is continuing; ii) the portfolio profile and collateral quality tests are satisfied after the purchase of the new eligible loans; and iii) after the new assets are added, no more than 15% of the outstanding pool consists of loans to borrowers that were not part of the initial pool or reviewed under a rating agency confirmation.

3.2.3 Priority levels

The portfolio management criteria help to maintain the portfolio's credit quality and diversification and may result in an increase in the portfolio's weighted average life.

The reinvestment of a repaid loan is subject to tight eligibility criteria. Loans shall be reinvested in the following rules-based selection priority to ensure credit quality is at least maintained:

1. Other loans from the same loan identification number,
2. Other loans from the same loan credit arrangement identification number,
3. Other loans from the same obligor identification number,
4. Other loans from the same obligor group identification number,
5. Other loans from same property type,
6. Other loans with the best slotting category, or
7. Other loans with the lowest loan-to value ratio.

If more than one loan is eligible at any level, the newest loan will be selected.

3.2.4 Portfolio profile, collateral quality and excess spread reserve tests

The management of the portfolio is also subject to portfolio profile and collateral quality tests. If above their respective limits, these metrics need to be maintained or improved each time Barclays modifies the portfolio's composition. The portfolio profile and collateral quality tests could lead to adverse migration between the initial pool and replenished pool, especially in relation to credit quality, property type and regional concentration.

Rules-based reinvestment criteria help to maintain portfolio credit profile

Figure 9: Portfolio profile, collateral quality and excess spread reserve tests

Reinvestment criteria	Portfolio as of 7 November 2022	Limit
Max. concentration to single obligor*	3.3%	Max. 2.0%***
Max. semi-annually interest paying exposure*	0.0%	Max. 10.0%
Max. annually interest paying exposure*	0.0%	Max. 2.5%
Max. fixed-rate loan exposures*	3.2%	Max. 7.5%
Max. early-warning list exposure*	0.0%	Max. 7.5%
Max. exposure to loans with LTV greater than 60%*	0.3%	Max. 10.0%
Max. exposure to main property type - hospitality*	0.0%	Max. 7.5%
Max. exposure to main property type - healthcare*	1.0%	Max. 7.5%
Max. exposure to main property type - retail regional shopping centre*	4.0%	Max. 7.5%
Max. exposure to main property types: hospitality, healthcare and retail regional shopping centre*	5.0%	Max. 20.0%
Min. exposure to main property type - industrial*	16.9%	Min. 10.0%
Min. exposure to main property type - office*	11.5%	Min. 10.0%
Min. exposure to main property type - multi-family*	19.4%	Min. 10.0%
Max. exposure to main property region - London*	26.1%	Max. 60.0%
Max. exposure to main property region - South-East*	13.9%	Max. 30.0%
Max. exposure to main property region - North-West*	6.7%	Max. 20.0%
Max. exposure to main property regions other than: London, South-East, North-West and mixed*	3.3%	Max. 7.5%
Max. weighted average maturity**	April 2024	Max. Nov. 2029 ¹
Min. weighted average portfolio spread**	2.1%	Min. 1.75%
Maximum LTV**	45.4%	Max. 55.0%
Min. excess spread reserve test	142.86%	Min. 142.85%
<p>*Portfolio profile test, figures computed as a percentage of the aggregate collateral balance of GBP 3.5bn, related to the pool non-defaulted principal balance and the cash sitting on the issuer principal account.</p> <p>**Collateral quality test</p> <p>***Not applicable for loans included in the closing pool or that have received a rating agency confirmation that its addition will not affect the current rating on the rated notes.</p>		

3.2.5 Replenishment period termination events

The transaction's reinvestment period, scheduled for two years, will be terminated if any of the following events occur: i) the sum of cumulative losses plus the pool balance in arrears for more than 90 days exceeds 4% of the closing pool balance; or ii) Barclays is no longer the collateral manager.

3.3. Portfolio analysis

We have analysed the portfolio on a loan-by-loan basis using a Monte Carlo simulation. For each loan, we assumed: i) a specific default probability; ii) a specific recovery upon default; and iii) asset correlation between the loans.

¹ The maximum weighted average maturity is the earlier of five years since the last purchase date and the payment date in November 2029; therefore, November 2029 is the hard limit.

3.3.1. Default rate analysis of the portfolio

The resulting default distribution for the reference portfolio exhibits a mean default rate of 8.9% and an implicit coefficient of variation of 79.4% over a weighted average portfolio life of seven years. The default rate distribution accounted for the diversification effect in the portfolio. The analysis incorporates the reinvestment period, the portfolio profile and collateral quality tests, which results in a reference portfolio exhibiting a longer weighted average life, worse credit quality and a higher property type concentration than the portfolio at closing date.

We inferred the loans' default probability from the mapping of Barclays' through-the-cycle default grades to Scope's ratings.

3.3.2. Recovery rate

We assumed a base case portfolio recovery rate of 98.3% and AAA and AA rating-conditional portfolio recovery rates of 78.5% and 89.0% that reflect haircuts of 20.1% and 9.4%, respectively.

We considered security value haircuts and market value decline rating-conditional assumptions which were defined as function of four main variables: i) property location (London, big UK cities and non-big UK cities); ii) main property type under our simplified mapping; iii) rating category; and iv) valuation date pre-pandemic (i.e. before 20 March 2020) and post-pandemic (i.e. after 20 March 2020). The date of 20 March 2020 is when Covid-19 social restrictions were first imposed by the UK government. For the provisional pool, we considered the big UK cities to be Manchester, Birmingham, Bristol, Leeds and Liverpool.

When defining the loan-by-loan ultimate recovery rate we considered the CRE loan maximum recovery as per our CRE and CMBS rating methodology.

Additionally, we included a 10% recovery rate haircut to exposures from the five largest obligor groups. Finally, we assumed that recovery proceeds are fully realised 12 months after defaulting.

3.3.3. Asset correlation

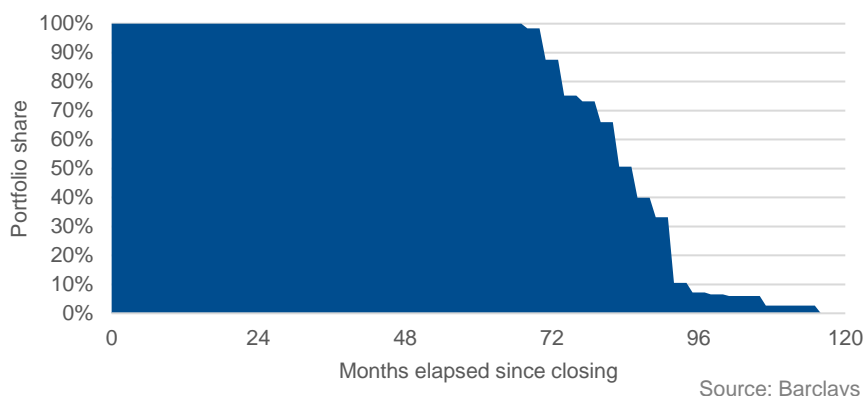
For this transaction, we assumed pairwise asset correlations ranging from 2% to 47%, composed of additive factors including a general factor of 2%, a location factor of 5% and a property type factor of 20%. The asset correlation reflects the loans' exposure to common factors such as the general economic environment, the jurisdiction and the respective property type. We considered an additional top-obligor factor of 20% for exposures from five largest obligor groups.

3.3.4. Amortisation

We assumed an amortisation profile that reflects the provided portfolio principal run-out scheduled, the granularity of the portfolio, the reinvestment period, and the portfolio management criteria including reinvestment criteria. The resulting amortisation profile has a seven-year weighted average life.

Portfolio modelled with a seven-year weighted average life

Figure 10: Expected portfolio amortisation profile (0% prepayment and 0% defaults)



4. Structure analysis

4.1. Capital structure

At closing date, proceeds from the issuance of the class A, B and C notes will be used by the issuer (Shelby) to purchase the beneficial interest over the initial portfolio of CRE mortgage assets from Barclays (the vendor). During the two-year scheduled reinvestment period, further eligible loans can be purchased through the reinvestment of past portfolio collections, subject to reinvestment criteria. The notes have a mandatory redemption in November 2039.

Holders of the rated class A and B notes will be paid a quarterly coupon equal to the compounded daily SONIA plus a margin of 1.5% and 2.5% p.a., respectively. Unused issuer excess of interest funds will be paid to the class C noteholders (Barclays) as their remuneration.

The three classes will repay their principal balance on a strictly sequential basis (i.e. class B notes will only start amortising once the class A notes are fully repaid, while class C notes will only start redeeming once both class A and B notes are fully repaid). The rated class A and B notes will benefit from 30% and 15%, respectively, of credit support in the form of note subordination.

Once the notes balance is less than 10% of its initial closing balance, the issuer, subject to certain conditions, has the option but not the obligation to redeem all outstanding notes.

The class C notes will be fully funded by the originator (Barclays). The class C noteholders will have the right but not the obligation to redeem the rated class A and B notes early as long as issuer funds are sufficient to make all payments that rank senior to the class C notes, pursuant to the priority of payments. Furthermore, the class C noteholder will in the case of an issuer event of default be entitled to provide funds to the Issuer in order to cure such a default. Such cure payments from the class C noteholder cannot be in a form of a loan.

4.2. Priority of payments

The structure features two separate waterfalls, one for interest payments and another for principal payments. Strictly sequential interest due payments and principal repayments, across the three classes of notes.

Realised losses on notes principal will be applied into the principal waterfall in reverse order: i) into the class C notes principal balance; ii) into the class B notes; then iii) into class A notes.

Rated class A and B notes benefit from high credit support of 30% and 15%, respectively

A quarterly senior expense cap of GBP 100,000 applies to trustee fees and expenses as well as to administrative expenses.

Figure 11: Interest available funds and interest priority of payments, simplified main items

Interest available funds
Interest collected from the portfolio
Interest collected on the respective accounts
Interest collected on eligible investments

Interest priority of payments
A (i) Taxes
A (ii) Retained profit
B Trustee fees and expenses (up to an amount equal to the senior expenses cap*)
C Administrative expenses up to the senior expenses cap
D Discretionary payment into expense reserve account – up to GBP 100,000
E Senior management fee (set at zero as long as Barclays is collateral manager)
F Liquidity facility interest and principal owned
G Class A notes interest
H(i) Class B notes interest
H(ii) Class B deferred notes interest
I During reinvestment period, payment into principal account for reinvestment to cure excess spread reserve test, if required
J Following reinvestment period, redemption of class A notes and then of class B notes
K Subordinated management fee (set at zero as long as Barclays is the collateral manager)
L Unpaid trustee fees and expenses
M Unpaid administrative expenses
N Class C notes interest
*GBP 100,000 per quarter as long as no issuer event of default has occurred and is continuing.

Figure 12: Principal available funds and principal priority of payments, simplified main items

Principal available funds
Principal collected from the portfolio
Principal recovery proceeds collected
Other funds identified as principal

Principal priority of payments
A Unpaid items from interest priority of payments list (A to H)
B Following reinvestment period, redemption of class A notes then of class B notes
C During reinvestment period to purchase substitute loans or payment into principal account for reinvestment
D Further unpaid items from the interest priority of payments list (L to M)
E Redemption of class C notes

4.3. Amortisation and provisioning

We believe that the combination of strictly sequential amortisation across the three classes, the excess spread reserve test (excess spread trapping mechanism), the principal

Rated notes benefit from fully sequential principal repayment

Strong liquidity coverage
supportive of rated notes'
interest and issuer senior
expenses

redirection mechanism and the available liquidity facility is effective at protecting the rated class A and B notes.

During the scheduled replenishment period, the portfolio's principal collections, after covering any senior expenses and/or class A and B notes shortfalls, will be reinvested into the purchase of new eligible loans. Following the end of the replenishment period, the notes will start amortising every quarter on a fully sequential basis.

4.4. Liquidity facility

The transaction benefits from a non-amortising liquidity facility of GBP 140m. If a shortfall persists after redirecting principal funds to cover any senior costs and/or class A and B note interest due (see above item A of the principal priority of payments), funds could be drawn from the liquidity facility. The drawing of funds from the liquidity facility provider (Barclays) can only be made up to the related available commitment amount, after taking into consideration past liquidity drawings.

The liquidity facility provider will charge the issuer every quarter in arrears over the unused commitment amount a fixed-rate fee of 0.2% p.a. Over the drawn commitment amount, it will charge a fee equal to the three-month compounded daily SONIA plus a 1% p.a. margin.

We have estimated that at closing date the liquidity facility can cover around six quarters of senior costs and class A and B note interest payments.

Transaction liquidity risk, is well mitigated by the following main features:

- Barclays' GBP 140m available liquidity facility;
- Issuer principal funds' redirection to cover senior costs and/or class A and B notes interest shortfalls;
- During the reinvestment period, upon an excess spread test failure, the class C interest's redirection into the issuer principal account, pending reinvestment into new eligible loans; and
- At any time when an event of default occurs, the option of the class C noteholder (Barclays) to provide the issuer the needed funds to cure such default.

4.5. Principal funds redirection to cover interest payment shortfalls

The issuer's principal available funds can be redirected to cover any shortfalls in the payment of senior expenses and/or class A and B notes interest. Any remaining shortfall can be covered by the liquidity facility.

4.6. Excess spread reserve test (excess spread trapping mechanism)

The excess spread reserve test is a curable trigger applicable during the replenishment period. This test aims to ensure the class A will maintain a minimum credit support of 30% at the start of the amortisation phase; the test is breached if the excess spread reserve ratio is lower than 142.85%. The excess spread reserve ratio corresponds to the ratio between the portfolio's outstanding principal balance and the class A notes' outstanding principal balance.

Upon a trigger breach, any of the issuer's interest funds remaining after class B interest is paid will be trapped in the issuer's principal account, pending reinvestment into new eligible loans. This mechanism prevents leakage of any of the issuer's interest funds into the class C noteholders' (Barclays).

4.7. Portfolio interest rate risk and margin compression

The transaction's portfolio and notes interest rate mismatch and the nature of the replenishment period expose the transaction to three types of risks: i) fixed-floating interest rate risk; ii) basis rate risk; and iii) asset yield compression risk.

Portfolio interest type, payment
frequency and transaction
features mitigate interest rate
risk and margin compression

3.9% of the closing portfolio is made of fixed-rate loans, while the rated class A and B notes are both floating-rate loans. Remuneration to the holders of the rated notes is linked to daily compounding SONIA, while the portfolio's asset yield is linked to SONIA (88.9% of total portfolio balance), the Bank of England base rate (7.2%) and a fixed rate (3.9%).

The portfolio's weighted average spread is 2.1% p.a. and the transaction's collateral quality test only ensures a minimum of 1.75% p.a. (weighted average spread test), leaving room for possible portfolio yield compression. In our modelling, we have considered the portfolio's minimum weighted average spread of 1.75% p.a. Margin compression is possible as the single asset reinvestment criteria related to a minimum margin of 0.25%, which allows the portfolio margin to erode. However, margin compression is unlikely given that the pool's borrowers are mainly non-investment grade.

As a mitigant for the fixed-floating interest rate risk deterioration during the replenishment period, we have the portfolio profile test (see Figure 9) which limits the maximum exposure of fixed-rate loans to 7.5%.

Given the size of the exposures and the transaction's mitigants for these risks, unhedged interest rate risk has limited materiality for the transaction.

5. Quantitative analysis

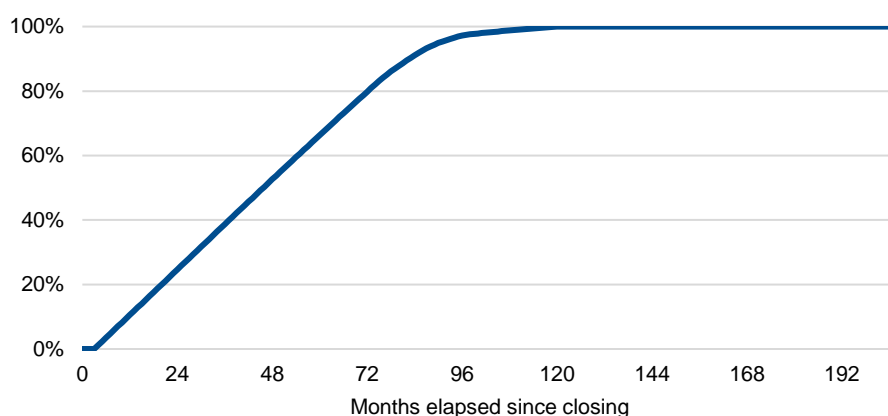
Our quantitative analysis reflects the transaction's strong credit enhancement mechanisms. We derived the portfolio's default rate distribution and recovery rates from a loan-by-loan Monte Carlo simulation of the entire portfolio and derived the default timings for the portfolio.

We used a cash flow tool combined with the portfolio's default distribution to calculate the probability-weighted loss for the rated notes. The cash flow tool also produces the expected weighted average life for the rated notes. Our cash flow analysis considers the mechanisms of this transaction, in particular, the overcollateralisation tests and the cross-collateralisation.

Our base case takes into consideration the default timing derived from the Monte Carlo simulation. We tested front-loaded and mid-loaded default timing scenarios, which demonstrated only a very limited impact given the available credit enhancement.

Figure 13 shows the cumulative default-timing assumption for the portfolio in the base case.

Figure 13: Default timing assumptions



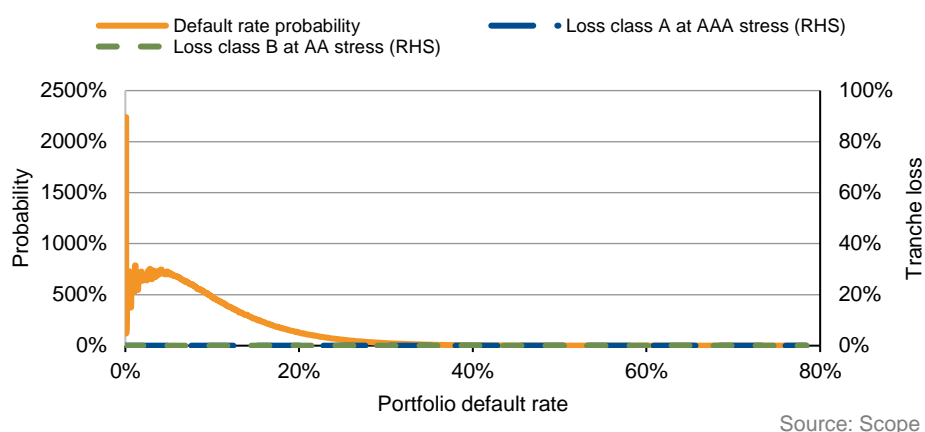
Source: Scope

Rated notes benefit from strong credit enhancement

Bespoke cash flow analysis

Figure 14 shows the losses of the rated notes at all portfolio default rates under a AAA stress for the class A and at a AA stress for the class B. The chart shows how subordination and other credit enhancement mechanisms protect the rated notes.

Figure 14: Cash flow analysis under AAA and AA rating-conditional recovery rates



Note: The probabilities displayed on the left-hand axis should be considered in the context of the calculation of the probability density.

The AAA_{SF} and AA_{SF} ratings assigned to the class A and B notes, respectively, constitute a forward-looking opinion on relative credit risks. The ratings reflect the expected loss associated with payments contractually promised by an instrument on a payment date or by its legal maturity. We calculate an instrument's expected loss over an expected risk horizon, with the result benchmarked against the idealised expected loss table provided in our General Structured Finance Rating Methodology.

6. Rating stability

6.1. Rating sensitivity

We tested the resilience of the ratings against deviations from the main input parameters: the portfolio mean-default rate and the portfolio 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.

The following shows how the ratings for the rated notes would change if the portfolio's expected default rate increased by 50% and the portfolio's expected recovery rate reduced by 50%:

- Class A: sensitivity to probability of default, zero notches; sensitivity to recovery rates, zero notches.
- Class B: sensitivity to probability of default, zero notches; sensitivity to recovery rates, one notch.

6.2. Break-even analysis

The resilience of the ratings is shown through the break-even default rate analysis. The rated class A and B notes would not experience any loss at portfolio lifetime default rates of 27.6%/16.7% or lower for class A/class B, respectively, under a zero-recovery rate assumption.

No losses for class A and B notes at portfolio default rates of 27.6%/16.7% or lower, respectively with zero recovery

Sovereign risk does not limit the transaction's ratings

7. Sovereign risk

7.1. The United Kingdom

Sovereign risk does not limit the ratings on this transaction. Our AA/Stable rating on the UK account for any risks posed by institutional framework or legal insecurity. Scope affirmed the UK's credit ratings with a Stable outlook on 25 November 2022.

The AA ratings are underpinned by the UK's large, wealthy and diversified economy which has proved broadly resilient to the Covid-19 shock, with output edging close to pre-pandemic level by late 2021. While the economic outlook has weakened materially in recent months, comparatively high wealth levels and a very diversified economic base remain significant resilience factors. A resilient and flexible labour market, a well-capitalised banking sector and sterling's role as a reserve currency also contribute to the country's ability to withstand economic shocks.

However, rising inflationary pressures and interest rates will strain finances and increase households' vulnerability to future shocks. Average mortgage rates on five-year fixed contracts with a loan-to-value ratio of 75% have increased more than fourfold from 1.3% in October 2021 to 5.6% in October 2022. Since around 85% of mortgage balances are on fixed rates, the sharp rise in interest rates will only gradually impact average mortgage costs. Small and medium-sized businesses will be impacted significantly faster as most of their loans tend to be on variable rates. There remains a considerable degree of uncertainty about the expected price correction in the housing market which will depend on how much further the Bank of England raises policy rates.

The labour market remains tight, with a high employment rate of 75.5% as of Q3 2022 and an unemployment rate near all-time lows of 3.6% amid a low participation level due to rising long-term sickness. Labour shortages still constitute a significant challenge as 83% of firms reported hiring difficulties in October, although there has been a slight decline in the total number of unfilled vacancies in recent months, signalling some easing in labour demand. The tightness in the labour market has supported robust nominal wage growth (up to +6% YoY in September), though it has so far remained below CPI inflation, causing a drop in real incomes. Wage growth developments will be an important factor for the Bank of England in future policy rate decisions.

The sharp increase in interest rates is leading to weaker debt sustainability. After declining to 95.3% in 2021, Scope expects the UK's debt-to-GDP ratio to rise above 100% of GDP by 2025. In addition to facing an increase in government bond yields since the escalation of the Russia-Ukraine war, the country has also been a big issuer of inflation-linked bonds in recent years. These make up around 25% of outstanding government debt, higher than other major European economies such as Germany (4%) and France (11%). The OBR estimates that the combination of higher interest rates and inflation will push up debt interest spending as a percent of revenues to its highest level since the 1950s, at 12% in 2022-23 (or 4.8% of GDP). OBR data indicates that this would make spending on debt interest the second highest budget expenditure item after the National Health Service. With inflation expected to fall back in 2023, debt interest spending as a share of GDP is expected to decrease somewhat to levels seen during the 1980s and 1990s.

Besides the weaker fiscal outlook, the economic outlook has also deteriorated significantly over the past months. The rise in inflation is eroding households' disposable income which is expected to decline by more than 7% between 2022 and 2024 according to the OBR. This would mark the steepest drop in disposable income since at least the 1950s. While tax rises announced in the Autumn Statement are largely progressive, they are expected to raise the overall tax burden which is expected to peak at 37.5% of GDP in 2024-25, its highest level since the end of World War II. Lower household purchasing power is the main

driver for lower economic growth over the next year. After robust growth in 2022 of around 4.4%, we expect the UK's economy to contract by 0.6% in 2023 and only rebound gradually towards its medium-term growth potential of around 1.5%.

Finally, the UK continues to face prolonged uncertainties surrounding the implementation of the post-Brexit UK-EU trade agreement. The OBR notes that Brexit had a clear adverse impact on UK trade by reducing trade volumes as well as lowering the number of trade relationships with EU firms. This is expected to result in the trade intensity being 15% lower in the long run than if the UK had remained in the EU as new trade deals with non-EU countries are not expected to materially offset the expected decline in trade with European partners.

The aftermath of the Brexit vote continues to cause political divisions. There has been no functioning government in Northern Ireland following the election in May 2022 as the Democratic Unionist Party refuses to restore power-sharing if the Northern Ireland protocol is not resolved. At the same time, the pro-independence Scottish National Party, which remained the biggest force in Scotland following the 2021 election, will continue to call for a referendum. However, a vote is highly unlikely in the near future as it would have to be authorised by the UK government, which considers the question of independence to have been settled by the previous vote in 2014. Scope expects negotiations between the UK and EU to remain tense, but to ultimately result in compromises to help implement the previously agreed Northern Ireland Protocol.

[For more insight into our fundamental analysis of the British economy see our rating news dated 25 November 2022.](#)

8. Counterparty risk

In our view, none of the counterparty exposures constrain the ratings achievable by this transaction. We considered counterparty substitution provisions in the transaction and, when available, our ratings or other public ratings on the counterparties. We also considered eligible investment criteria.

The transaction is exposed to counterparty risk from the following main counterparties: i) Barclays as originator, vendor, vendor trustee, collateral manager, servicer collection account bank, liquidity facility provider, initial purchaser and retention holder; ii) Elavon as issuer account bank, agent bank, principal paying agent and registrar; iii) U.S. Bank Global Corporate Trust Limited as collateral administrator; and iv) U.S. Bank Trustees Limited as trustee.

The counterparty roles of issuer account bank (Elavon) and liquidity facility provider (Barclays) are material. However, the transaction's downgrade and replacement language, i.e. within 30 calendar days upon a counterparty's loss of a minimum BBB rating by Scope, is effective at mitigating counterparty risk, with the remaining risk immaterial.

8.1. Operational risk from collateral manager

Operational risk from the collateral manager role is well mitigated in this transaction by the high credit quality and general resolvability of Barclays as one of the 30 banks that the Financial Stability Board considers a Globally Systemically Important Bank. Nevertheless, our analysis accounts for a potential collateral manager replacement by considering a stressed senior management fee after the reinvestment period.

8.2. Commingling risk from Barclays collection account bank

Commingling risk is present in the transaction as debtors will make payments on CRE loans into Barclays' collection account bank, also held by Barclays. We consider this risk as immaterial due to high creditworthiness of Barclays and the daily cash sweeps from Barclays' collection account bank into the issuer account bank.

Counterparty risk does not limit the transaction's ratings

Collateral manager replacement unlikely

Commingling risk is immaterial for the rated notes

9. Legal structure

9.1. Legal framework

This securitisation is governed by English law, with an issuer located in the UK and under the securitisation regime. The issuer (Shelby) has been duly incorporated as a private company with limited liability under the law of England. Shelby has only one share, which is held by Intertrust Corporate Services Limited (the issuer shareholder) as the share trustee for charitable beneficiaries. We consider the transaction's legal structure as standard for UK SPVs (special purpose vehicles) aiming to achieve perceived bankruptcy remoteness.

Based on the transaction's documentation as well as representations and warranties made by the notes' issuer, this entity's features are consistent with those of a bankruptcy remote entity, such as contractual restrictions related to limited recourse, non-petition and debt limitations.

As is common in some UK securitisation transactions, all assets were legally transferred from the vendor (Barclays) to the issuer through a declaration of trust over the loans coupled with a power of attorney, rather than by equitable assignment. This is due to restrictions caused by their underlying jurisdiction or by the loans themselves. At closing date and on each subsequent purchase date, the issuer will acquire the beneficial interest in the purchased loans and the related loan security, pursuant to the trust created under the vendor trust deed.

9.2. Use of legal and tax opinions

We reviewed the English legal and tax opinion produced by a reputable law firm with significant experience in international securitisation. This opinion provide comfort on the issuer's legal and tax-efficient structure and support our general legal analytical assumptions.

The issuer is a private limited company incorporated in England, established as a securitisation company subject to the securitisation law. The issuer has the authority to enter into transaction documents, exercise and perform its obligations, and issue notes. The issuer's obligations under an English court would be recognised as legal, valid and binding in accordance with the transaction documents. The transaction documents are governed by English law and would be recognised by the courts in England, where the issuer is located.

The tax opinion considers the structure to be tax-efficient, i.e. no taxes apply, except for the minimum retained profit tax and VAT in the context of the issuer's contracted services.

Regarding how the trust (vendor trust) would operate should Barclays become insolvent, we understand based on the legal opinion that the insolvency administrator would be unable to successfully contest the constitution of such a trust. This is supported by the vendor's power of attorney provided by Barclays (the vendor) to the issuer, the collateral manager and the trustee as the vendor's attorney. The vendor's power of attorney allows the attorneys to enforce the assets against the underlying obligors, instead of Barclays (the vendor).

10. Monitoring

We will monitor this transaction based on the performance reports from the collateral administrator as well as other available information. The ratings will be monitored on an ongoing basis.

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

Legal asset transfer through declaration of trust coupled with power of attorney

Tax-efficient set-up and issuer perceived to be a bankruptcy-remote special purpose vehicle

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



11. Applied methodology and data adequacy

For the analysis of this transaction we applied our General Structured Finance Rating Methodology, CRE and CMBS Rating Methodology and Counterparty Risk Methodology. All documents are available on our website, www.scooperatings.com.



I. Summary of portfolio main characteristics

The analysis considered replenishment covenants and the provisional portfolio composition as of 07 November 2022.

Key Features	Portfolio as of 07 November 2022	Scope portfolio adjustments for replenishments
Originator*	Barclays Bank PLC (100%)	n/a
Origination source	Corporate Banking	n/a
Loan origination jurisdiction and currency*	UK and in GBP (100%)	n/a
Debtors' jurisdiction*	UK (99.7%) and 0.3% (Luxembourg)	n/a
Portfolio balance (GBP bn)	Max 3.5/current 2.9 ¹	n/a
Average principal balance per debtor group (GBP m)	35.4	n/a
Number of debtors	89	n/a
Number of properties	4,297	n/a
Number of tenants/units	13,961	n/a
Average number of properties per loan	48	n/a
Average number of tenants/units per loan	157	n/a
Maximum, minimum and average loan size (GBP m)	114.8, 1.9 and 32.2	n/a
Weighted average loan-to-value**	45.4%	n/a
Weighted average interest coverage ratio**	4.0x	n/a
Weighted average original time to maturity**	6.2 years	n/a
Weighted average seasoning**	4.8 years	n/a
Weighted average remaining time to maturity**	1.5 years	7.0 years
Weighted average nominal rate**	2.8%	n/a
Weighted average spread**	2.1%	1.75%
Portfolio by main property type identified by Scope, following its simplified mapping*	Residential (28.7%), office (22.3%), industrial (21.7%), retail (12.4%), other (10.7), hospitality (2.9%) and healthcare (1.3%)	n/a
Portfolio by loan interest rate type distribution*	Floating-rate (96.1%) and fixed-rate (3.9%)	n/a
Portfolio by loan interest reference rate*	SONIA rate (88.9%), Bank of England base rate (7.2%) and fixed-rate loan (3.9%)	n/a
Portfolio by loan amortisation type*	Bullet amortisation (63.8%) and amortisation schedule (36.2%)	n/a
Portfolio by loan interest payment frequency*	Monthly/quarterly (100%)	n/a
*By current pool principal balance outstanding **Weighted by current pool principal balance		

¹Barclays will run a replenishment shortly after execution to further ramp up the portfolio, to the maximum of GBP 3.5bn.



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