S&P Global Ratings

Research

Presale:

Red & Black Auto Germany 7 UG (haftungsbeschränkt)

October 19, 2020

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Preliminary Ratings

Class	Prelim. rating*	Prelim. amount (mil. €)	Available credit enhancement (%)§	Interest	Legal final maturity
A	AAA (sf)	935.000	7.0%	One-month EURIBOR plus [0.70%] with a 0.0% floor	Oct. 15, 2029
B	AA+ (sf)	25.000	4.5%	One-month EURIBOR plus a margin with a 0.0% floor	Oct. 15, 2029
C	A (sf)	25.000	2.0%	One-month EURIBOR plus a margin with a 0.0% floor	Oct. 15, 2029
D	BBB (sf)	10.000	1.0%	One-month EURIBOR plus a margin with a 0.0% floor	Oct. 15, 2029
E	NR	5.000	0.5%	Fixed rate	Oct. 15, 2029
Subordinated loan	NR	4.975	N/A	Fixed rate	N/A

Note: This presale report is based on information as of Oct. 19, 2020. The ratings shown are preliminary. Subsequent information may result in the assignment of final ratings that differ from the preliminary ratings. Accordingly, the preliminary ratings should not be construed as evidence of final ratings. This report does not constitute a recommendation to buy, hold, or sell securities. *Our ratings address timely payment of interest and ultimate payment of principal on the class A to D notes. §Available credit enhancement consists of subordination and a general reserve that is ultimately available to mitigate potential principal shortfalls. NR--Not rated. N/A--Not applicable.

Supporting Ratings

Institution/role	Ratings	Replacement trigger	Collateral posting trigger
Elavon Financial Services DAC as bank account provider	AA-/Stable/A-1+	A/A-1*	N/A
DZ BANK AG as swap counterparty	AA-/Negative/A-1+	A-	A-
Societe Generale S.A. as credit support provider	A/Negative/A-1	BBB§	N/A

*A+ if there is no short-term rating assigned by S&P Global Ratings. §Funding trigger for commingling and set-off reserve. N/A--Not applicable.

Transaction Summary

- S&P Global Ratings has assigned its preliminary credit ratings to Red & Black Auto Germany 7 UG (haftungsbeschränkt)'s (Red & Black Auto 7's) asset-backed floating-rate class A, B, C, and D notes. At closing, Red & Black Auto 7 will also issue unrated class E notes.
- This will be Bank Deutsches Kraftfahrzeuggewerbe GmbH's (BDK's) seventh German publicly-placed ABS transaction. The underlying collateral comprises German loan receivables for new, used, and newly used cars. BDK originated and granted the loans to its private customers. According to the pool, 60.7% of the current principal balance on contracts will amortize with a final balloon payment.
- The transaction will amortize as of day one. The transaction will have separate interest and principal waterfalls. The interest waterfall will feature a principal deficiency ledger mechanism, by which the issuer can use excess spread to cure principal losses.
- A combination of excess spread, subordination, and the cash reserve will provide credit enhancement.
- Société Générale S.A. will fund a reserve to cover for setoff risk and commingling risk, if its long-term issuer credit rating is lowered below 'BBB', or if BDK becomes insolvent. In our view, the reserve covers in full the seller risks.
- The assets will pay a monthly fixed interest rate, and the notes pay one-month Euro Interbank Offered Rate (EURIBOR) plus a margin subject to a floor of zero. Consequently, the rated notes will benefit from an interest rate swap until the legal final maturity date.
- Our preliminary ratings address timely payment of interest and ultimate payment of principal on the class A, B, C, and D notes.
- Our structured finance sovereign risk criteria and our operational risk criteria do not constrain our preliminary ratings in this transaction. Counterparty risk is adequately mitigated in line with our counterparty criteria.

The Credit Story

Strengths, Concerns, And Mitigating Factors

Strengths	Concerns and mitigating factors
In our view, BDK is an experienced and established originator and servicer in the German securitization markets. The business continuity plan was successfully activated at the start of lockdown due to the COVID-19 pandemic, and most of the staff has been able to continue operations and handle borrowers' requests remotely during this period with minimal disruption. This will be the bank's seventh German publicly-rated ABS transaction. The previous transactions have performed well.	BDK expects delinquencies to increase in particular for borrowers with deferrals already in place. However, in our opinion, payment holidays related to the COVID-19 pandemic are so far very limited and represent only 0.37% of the total principal balance and 0.31% of the total number of accounts. Our cash flow assumptions incorporate a liquidity stress on collections to account for payment holidays.
The portfolio is highly granular and well diversified across Germany's federal states. As of the pool cut-off date, the largest single obligor represented about 0.01%, and the top 20 obligors comprised 0.14% of the portfolio.	About 60.7% of the loan volume in the portfolio relates to balloon loans, which could increase default risk if the market value of the car declines significantly. Under this scenario, borrowers would face a payment shock, and we assume the risk of borrower default would increase.

Strengths, Concerns, And Mitigating Factors (cont.)

Strengths	Concerns and mitigating factors
As of the cut-off date, the portfolio did not contain any contracts that are overdue for more than 30 days, or defaulted contracts.	We do not rate the seller and originator, BDK, which also services the loans. This might result in commingling risk if BDK defaults, because collections from the assets are channeled through BDK's accounts. In addition, a substantial share of the contracts has been sold with insurance products. If BDK and the insurer become insolvent at the same time, the borrower could have the right to reduce the installments by an amount equal to the premiums related to insurance protection. To mitigate both risks, Société Générale would fund the transaction's seller risk reserve, if the rating on Société Générale falls below 'BBB', or if BDK becomes insolvent.
The transaction will not not revolve, so the pool's credit quality will not change through asset substitution.	The transaction will allow pro rata redemption of all rated classes if the class A notes' credit enhancement has increased to 11%. Pro rata redemption of the junior class of notes would cause the available credit enhancement for the senior noteholders to reduce in absolute terms. The transaction will feature various performance triggers for PDL and cumulative net ratios, mitigating the risk derived from pro rata amortization. Our cash flow model incorporates those triggers, testing the impact of a change in the type of amortization of the notes.
The structure will benefit from an amortizing cash reserve, which will be fully funded at closing. The reserve will serve primarily as liquidity support to mitigate any cash flow strains. Ultimately, it will be available to repay the notes at the end of the transaction's life.	

Asset Description

As of the cut-off date, the collateral pool backing the notes comprised 84,864 loans, with a total current principal balance of €1,000 million.

The entire portfolio will comprise auto loan contracts. The products will include:

- Standard fully amortizing contracts with duration up to 84 months; and
- Amortizing contracts (up to 72 months duration), with a final balloon payment; and
- Three-way-financing contracts (up to 72 months duration), with a final balloon payment including a separate dealer buy-back agreement.

The securitized pool will comply with the eligibility criteria under the transaction documents. The following is a non-exhaustive list of these criteria:

- The loan receivable derives from a loan agreement, which is legal, valid, and binding, based on the originator's form of contract, and governed by German law;
- At least one loan installment has been paid in the loan agreement;
- There is no material breach, default, or violation of any obligation under the associated loan agreement;
- The receivable is not derived from a defaulted loan agreement;
- The receivable gives rise to monthly installments;

- The receivable provides for a remaining term of at least one month;
- The receivable provides for an original term no longer than 84 months;
- The balloon installment does not exceed 60% of the vehicle sales price;
- The original outstanding receivable balance does not exceed 110% of the vehicle sales price;
- The receivable bears fixed nominal interest rate above or equal to 1.85%;
- Each loan receivable is denominated in euros;
- Each loan receivable is payable by direct debit;
- Each loan receivable is not in arrears; and
- Each debtor of the receivable is not employed with BDK or any of its affiliates.

Collateral key features

Collateral Key Features*

	Red & Black Auto 7	Red & Black Auto 3	Globaldrive 2020-A	RevoCar 2020
Originator	BDK	BDK	FCE Bank	Bank 11
Pool cut-off date	Aug. 31, 2020	Feb. 1, 2015	May 30, 2020	May 31, 2020
Principal outstanding of the pool (mil. €)	1,000	960	546.47	800
Average remaining loan principal balance (€)	11,784	10,389	19,542	53,837
Number of loans	84,864	92,404	27,964	14,860
WA original term (months)	60.02	58.3	45.9	57.1
WA seasoning (months)	12.89	8.5	6.1	9.6
WA remaining term (months)	47.13	49.8	39.8	47.5
Weighted-average yield (%)	3.49	4.45	3.25	3.1
Top 1 borrower concentration (%)	0.01	0.02	0.05	0.02
Top 20 borrower concentration (%)	0.14	0.2	0.47	0.19 (top 15)
Top 3 geographic concentration (%)				
	17.1 (Nordrhein-Westfalen)	17.91 (Nordrhein-Westfalen)	29.64 (Nordrhein-Westfalen)	21.05(Nordrhein-Westfalen)
	16.7 (Bayern)	16.18 (Bayern)	13.88 (Baden-Wuerttemberg	17.86 (Bayern)
	12.9 (Baden-Wuerttemberg)	14.3 (Baden-Wuerttemberg)	10.93 (Bayern)	13.85 (Baden-Wuerttemberg

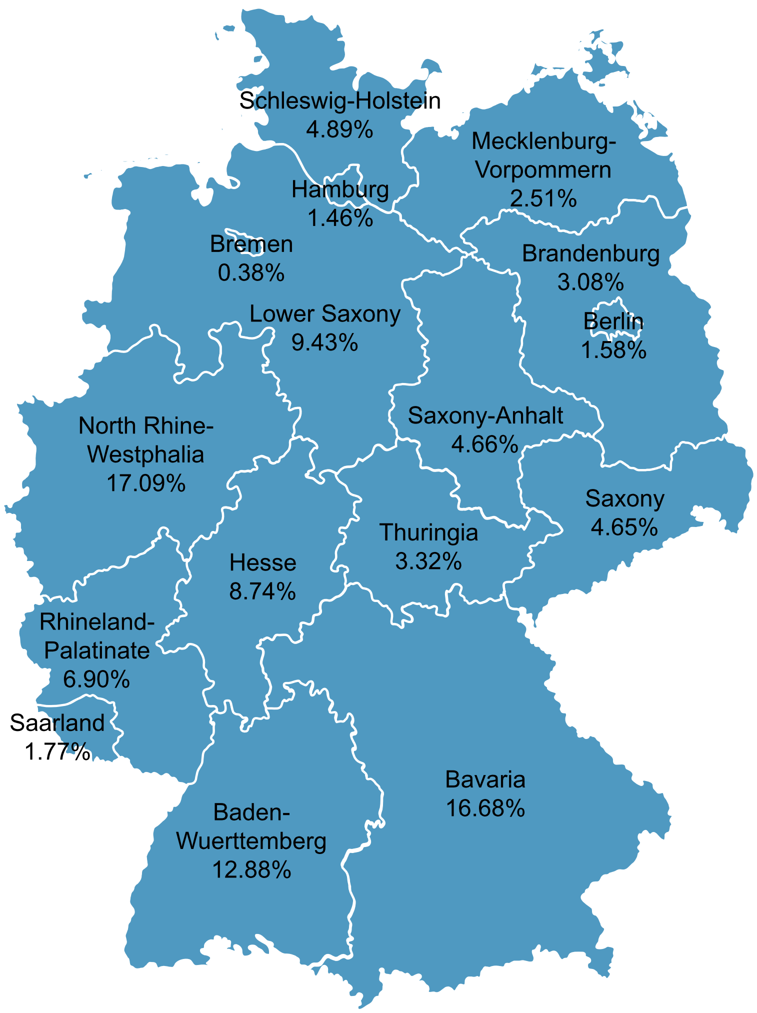
Collateral Key Features* (cont.)

	Red & Black Auto 7	Red & Black Auto 3	Globaldrive 2020-A	RevoCar 2020
Manufacturer concentration (%)				
	28.27 (Ford)	32.5 (Hyundai)	99.98 (Ford)	10.29 (Brand 1)
	19.42 (Hyundai)	18.7 (Ford)	0.02 (other)	9.45 (Brand 2)
	18.24 (Opel)	18.24 (Opel)	N/A	9.29 (Brand 3)
Loan type (%)				
Amortizing	39.3	53.81	7.3	35.5
Standard with balloon	58.54	46.19	4	8.5
Balloon (Three Way Financing)	2.16		88.7	56
Vehicle type (%)				
New	15.86	24.2	90.21	50
Newly used	39.99	75.8	8.16	0
Used	44.14		1.63	50
Customer type (%)				
Private	100	87	90.76	97
Financed vehicle type (%)				
Cars	95.6	99.5	100	99.03
Bus and delivery vans	4.4	0.5 (Bus)		0.97 (motorbikes and scooters)
Engine type (%)				
Petrol	64.41	-	66.22	N/A
Diesel	33.96	-	32.34	N/A
Others (plug-ins, hybrids, etc.)	1.63	-	1.44	N/A

*Calculations are according to S&P Global Ratings' methodology and based on the outstanding discounted principal balance. WA--Weighted average. NRW--North Rhine-Westphalia. BW--Baden-Wuerttemberg. N/A--Not available. TCM--Trade cycle management.

Chart 1

Geographic Distribution



Originator/seller

BDK provides auto loan financing to German private and commercial customers, and together with its parent company ALD Lease Finanz GmbH (which controls 51% of BDK's voting rights), is one of the largest noncaptive car finance banks in Germany. ALD Lease Finanz is a 100% subsidiary of the Société Générale group.

BDK started its operations in 1991 (founded as Garanta Finanzdienst GmbH), and in 2005, there was a spin-off of its leasing business for private and commercial customers of ALD AutoLeasing D GmbH into the new ALD Lease Finanz. BDK is the finance partner of the German car dealers association. BDK provides the loan business, and ALD Lease Finanz provides the leasing business.

These two entities work with the same staff, systems, and processes. BDK is a licensed bank in Germany and is therefore regulated by the German regulatory authority (BaFin).

As part of its business model, BDK maintains various cooperations with manufacturers and car dealerships. In 2012, BDK started cooperating with FFS Group, which led to the creation of a branch in Stuttgart. Following the cooperation, BDK was holding a quasi-captive function for Hyundai until 2017. In 2019 BDK started cooperations with Subaru Deutschland GmbH to finance vehicles of Subaru brand and with Emil Frey Gruppe Deutschland, a large dealership and vehicles importer.

BDK's annual loan origination volumes have increased to €1.62 billion and €1.77 billion in 2018 and 2019, respectively, from €1.59 billion in 2017. Over the same period, the total outstanding loan volume increased by about 14.5% to €3.98 billion. The increase in volumes is mainly attributable to an overall increase in BDK's used car financing activities, which increased to 82.25% of total origination volumes in 2019 from 77.12% in 2017. The split between commercial and private customers has remained stable, with 80%-90% originated to private customers.

BDK offers a broad range of car financing products to its customer base. However, only amortizing loans (classic financing) and balloon loans (balloon financing and three-way-financing) form part of the portfolio. Further, only loans granted to private customers are included in the portfolio.

The final balloon installment as percentage of the vehicle sale price is determined based on the contract duration of the respective loan and is independent of the vehicle. We understand that BDK can increase the determined balloon payment by 5% for used vehicles and by 10% for new vehicles. In the portfolio, the balloon portion of each receivable is capped at 60% of the original loan amount.

BDK's loan book is diversified across car brands, which is a strength, in comparison with captive finance companies. It also has adequate geographic diversification and a good franchise, in our view.

The seller has developed a high level of experience in its core business of auto financing. It also has efficient procedures and experienced staff in underwriting and collection processes, in our view.

Underwriting

Origination is typically done through BDK's co-operating car dealers in Germany, whereas the credit approval process remains with BDK. The underwriting process is a two-step assessment, starting with the dealer entering the customer's information in BDK's web-based application tool. In the second step, BDK assesses the applicant's creditworthiness, using external credit bureau data (SCHUFA or Creditreform) and BDK'S internal scoring models. The credit decision can either be an automated or manual approval, or a rejection. Non-automated decisions are underwritten by qualified employees from BDK's acceptance department and subject to specific credit authority limits.

Servicing

A delinquency department manages any delinquent contracts. It makes phone calls, sends reminder letters, and ultimately repossesses the vehicles. The first reminder letter is sent out no later than 15 days after the relevant due date. Contract termination for a private customer can occur after two monthly payments totaling at least 10% (for contracts with up to a 36-month term) or 5% (for contracts with a term of more than 36 months) of the total outstanding contract volume have been missed. After termination of the loan contract, the vehicle will be repossessed and then re-marketed by BDK's remarketing department. If repossession and/or full recovery is not possible, we understand that BDK would initiate legal action.

The seller's credit risk management process is very much aligned with that of Société Générale. It undertakes credit risk assessments and monitoring in Hamburg. BDK's risk controlling department, at the holding company level, controls and monitors all standard risk indicators.

Impact of COVID-19

We conducted a virtual corporate overview of BDK's origination, underwriting, collections, and risk management practices in September 2020. The business continuity plan was successfully activated at the start of the lockdown caused by the pandemic. Most of the staff has been able to continue operations and handle borrowers' requests remotely during this period with minimal disruption to operations. We consider these to be in line with general market practice and our criteria for assessing operational risk (see "Global Framework For Assessing Operational Risk In Structured Finance Transactions," published on Oct. 9, 2014 and "Standard & Poor's Revises Criteria Methodology For Servicer Risk Assessment," published on May 28, 2009). In our operational risk analysis, we look at the risk that cash flows may be disrupted following an operational failure of the servicer. The application of our operational risk criteria does not constrain the maximum potential preliminary ratings on the notes.

The transaction will not have a back-up servicer at closing, but the transaction documents state that a back-up servicer would be appointed if the rating on Société Générale, the majority shareholder, were to fall below 'BBB-'. We rely on the general availability of servicing in the German market to mitigate the risk of servicing disruption and have applied a stressed servicing fee in our cash flow analysis, in line with market standards. Furthermore, the cash reserve will provide additional liquidity and will mitigate servicer disruption risk.

Credit Analysis

We analyzed the transaction's credit risk under various stress scenarios by applying our European auto ABS criteria.

We received quarterly and monthly static gross loss data and recovery data from first-quarter 2004 to second-quarter 2020, the entire originator loan book, and for the subpool, private and commercial data. We have also used the performance information available from the predecessor transactions, including those we have not rated. In addition, we received origination volumes, dynamic delinquency, and prepayment data for this period.

The quality of data provided is in line with our quality, timeliness, and reliability standards.

Macroeconomic and sector outlook

In our analysis, we considered the following economic data in determining our credit assumptions (also see "Related Research").

The economic costs of the pandemic for Europe are mounting quickly as measures to contain the virus increase, both in the region and abroad. We expect GDP to fall by about 7.4% in the eurozone this year, with a gradual rebound of 6.1% in 2021. In our base-case scenario for Germany, we forecast economic growth to decrease by 5.4% this year and rebound in 2021 by 4.71%. In 2022 and 2023, we forecast GDP growth of 2.4% and 1.6%. At the same time, we expect unemployment rates to increase to 4.3% in 2020 and 4.5% in 2021, compared with 3.1% in 2019. In our view, the partial unemployment schemes unveiled across Europe will limit the rise in unemployment. We believe changes in GDP growth and the unemployment rate largely determine portfolio default performance. We set our credit assumptions to reflect our worsened economic outlook for Germany.

S&P Global Ratings acknowledges a high degree of uncertainty about the evolution of the coronavirus pandemic. The current consensus among health experts is that COVID-19 will remain a threat until a vaccine or effective treatment becomes widely available, which could be around mid-2021. We are using this assumption in assessing the economic and credit implications associated with the pandemic (see our research here: www.spglobal.com/ratings). As the situation evolves, we will update our assumptions and estimates accordingly.

Table 1

Macroeconomic And Sector Outlook

	Actual	Forecast		
	2019	2020	2021	2022
Real GDP (y/y growth, %)	0.6	(5.4)	4.7	2.4
Unemployment rate (annual average, %)	3.2	4.3	4.5	4.0
CPI (%)	1.4	0.0	1.1	1.5
Central bank policy rates (end of period, %)	(0.4)	(0.4)	(0.4)	(0.4)

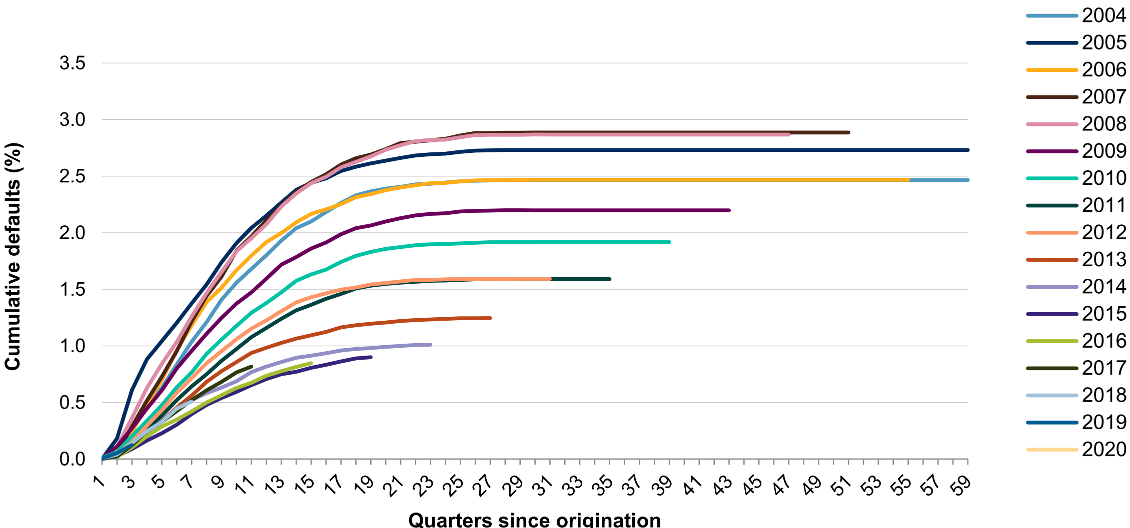
Gross loss base case

We have based our analysis solely on the subportfolio "private" as it will represent 100% of the closing pool.

Chart 2 shows yearly averages of quarterly static cumulative gross loss data from first-quarter 2004 to second-quarter 2020 for private loans.

Chart 2

Total Pool
By quarter of origination



Our base-case assumptions reflect performance trends based on historical data in BDK's book, our view of portfolio quality, and our analysis of the originator's underwriting and servicing standards. Overall, the portfolio's performance has been in line with Germany's economy, for which we have seen strong improvement since 2010, compared with 2008 and 2009. As the performance data only covers a few months since start of the COVID-19 pandemic in Europe, the impact on observed defaults has been limited so far. This is also due to furlough schemes in Germany, which have been successful in keeping most workers in employment. At the same time, companies have been able to survive lockdowns and reopen their doors quickly, owing to governments' credit guarantees and government delays in bankruptcy filing.

However, to account for the deteriorating macroeconomic environment in Germany due to the pandemic, we have applied an increase of 0.25% to our gross losses base case to 2.25%.

While we expect higher base-case defaults because of COVID-19, we do not currently believe that the expected level of macroeconomic stress warrants an overarching revision to the stressed default assumptions at the 'BBB' rating level or higher, although that could change. Hence, we have lowered the multiples between 'AAA' and 'BBB'.

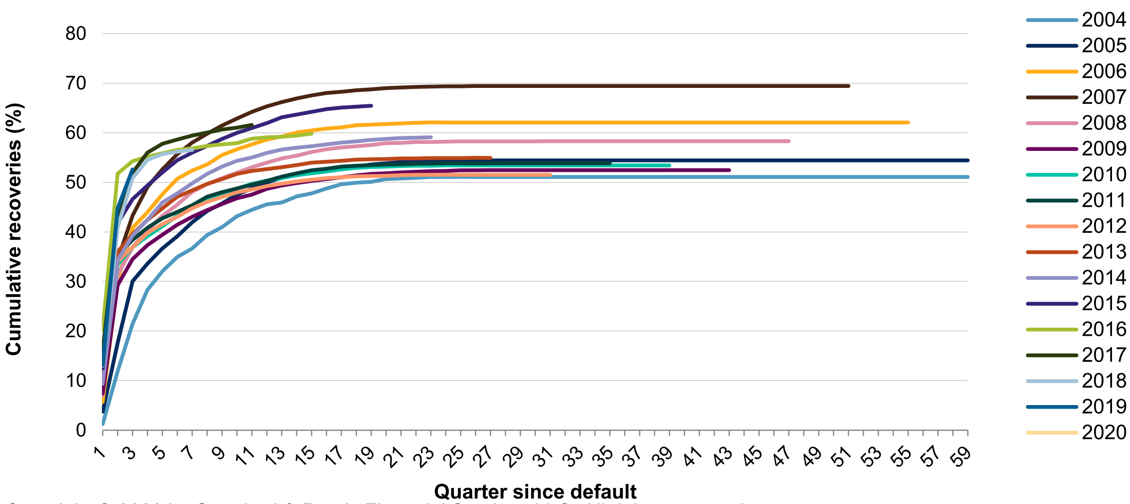
Recoveries and recovery timing

Recoveries are a combination of vehicle sale proceeds and ancillary payments received from the borrowers. Under our European auto ABS criteria, we establish recovery rate assumptions based primarily on an analysis of historical recovery rates for the issuer and the market, the volatility of past performance as well as credit, operational, or other factors that might affect the timing, amount, and sustainability of recovery rates. Typical stressed recovery rates assumed are in the range of 30% to 45%.

We expect the transaction's performance to be in line with its peer auto loan originators in Germany. On this basis, and considering the historical data, we have maintained our uniform stressed recovery assumption at 35%.

Chart 3

Recovery Curves



We assume that proceeds from recoveries are available to the transaction 13 months after the borrowers default on contracts. We have not increased our recovery timing for this transaction in light of COVID-19, as we believe that a delay in the repossession and sale of the vehicle is sufficiently captured under our current assumption.

Table 2

Credit Assumptions Summary—Closing Pool

Rating level	Cumulative gross loss base-case (%)	Stress multiple (x)	Stressed cumulative gross losses (%)	Stressed recovery rate (%)	Stressed cumulative net losses (%)
AAA	2.25	4.18	9.40	35	6.11
AA	2.25	3.29	7.40	35	4.81
A	2.25	2.40	5.40	35	3.51
BBB	2.25	1.64	3.70	35	2.40
BB	2.25	1.60	3.60	35	2.34
B	2.25	1.35	3.04	35	1.97

Table 3

Peer Comparison At 'AAA'

Rating level	Red & Black 7	Red & Black 3	Globaldrive Auto Receivables 2020-A B.V.	RevoCar 2020 UG (haftungsbeschraenkt)	E-Carat 10 FCT	Silver Arrow 10
Stressed combined cumulative gross loss (%)#	9.40	13.7	9.08	12.99*	14.49*	10.80
Stressed recovery rate (%)	35.00	30.60	40.00	22.00	40.00	42.00
Stressed combined cumulative net loss (%)	6.11	9.53	5.45	10.13	8.70	6.26

#Excluding balloon gross loss assumptions (if applicable).
*Based on worst-case pool composition.

Market value risk

Balloon contracts and three-way-financing contracts may introduce additional obligor default risk to the transaction if the borrower defaults on its obligation to make the balloon installment because the sale of the car in the open market did not result in a price high enough to fully cover the balloon payment.

We have set our balloon gross loss assumption at the 'AAA' level and at 7.5%, based on the significant diversification by brand and vehicle type, BDK's balloon-setting policy, and the overall size and concentration of maturing balloon payments. We also considered that about 35% of the pool will comprise diesel vehicles, almost all of which will comply with the current Euro 6 emission standard.

Table 4

Balloon Gross Loss Assumptions—Closing Pool

Rating level	Balloon gross loss rate(%)
AAA	7.5
AA	6.0
A	3.5
BBB	2.0
BB	0.0
B	0.0

In applying the additional loss rate in our cash flow analysis, the aggregate balloon payments on loans securitized are adjusted to reflect stress scenario defaults and prepayments to establish an adjusted balloon payment amount. The applicable additional balloon loss rate is multiplied by the adjusted balloon payment amount as a percentage of the total pool balance to calculate the incremental balloon gross loss rate.

Transaction Structure

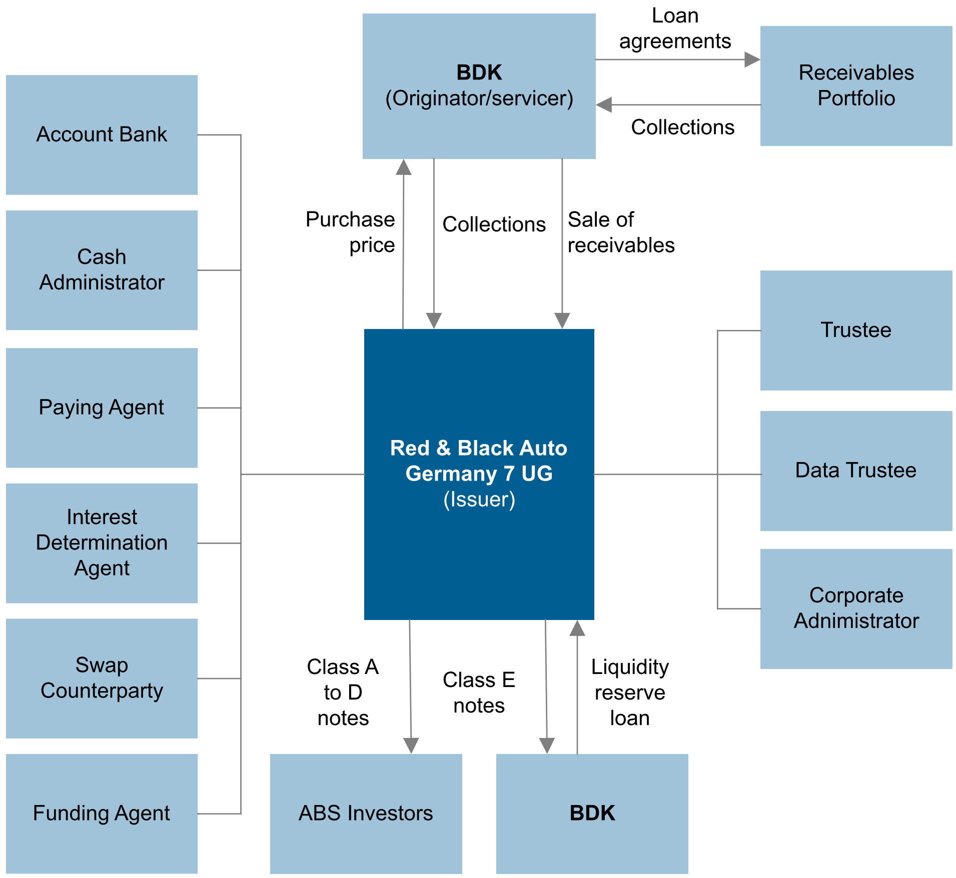
At closing, Red & Black Auto 7 will purchase directly from BDK a portfolio of German auto loan receivables. The issuer will use the note issuance proceeds to finance these purchases. All receivables will be purchased at par value, €1,000 million (see chart 4). The seller will transfer to the issuer the security title to the vehicles and the receivables. Therefore, the issuer would be able to enforce its right to the vehicles if the seller were to become insolvent.

The class A to D notes will pay a floating rate of interest linked to one-month EURIBOR. To hedge the fixed-to-floating rate risk between the assets and the class A to D notes' liabilities, Red & Black Auto 7 will enter into an interest rate swap with DZ Bank AG. We have considered this feature in our cash flow analysis.

Chart 4

Transaction Structure

Red & Black Auto Lease Germany 7 UG



The issuer will be a German special-purpose entity, which we consider to be bankruptcy remote under our legal criteria (see "Structured Finance: Asset Isolation And Special-Purpose Entity Methodology," published on March 29, 2017). We expect the transaction legal opinion at closing will confirm that the sale of the assets would survive the seller's insolvency.

Cash Flow Mechanics

The class A, B, C, D and E notes will pay interest and principal on the monthly interest payment dates (IPDs). The first IPD will be Dec. 15, 2020. The class A to D notes will pay interest at a floating rate plus a margin, provided that if the interest rate is less than zero, it will be deemed to be zero. The class E notes will pay a fixed rate. The legal final maturity date will be Oct. 15, 2029.

The transaction will have separate interest and principal waterfalls.

PDL mechanism and principal borrowing mechanism

The transaction will feature a gross loss PDL. The PDL will be divided into five sub-ledgers--one for class A to E. Periodic gross losses will result in debits due to the PDL in reverse order, i.e., starting with the subordinated notes sub-ledger upward.

The principal waterfall will feature a principal borrowing mechanism, by which the issuer can use available principal amounts to cure shortfalls of senior expenses and interest on the class A to D notes (if not deferred).

Any principal borrowed to make up shortfalls in the interest waterfall will also result in a debit to the PDL. Debits to the PDL may subsequently be cleared through the interest waterfall.

Interest deferral trigger

The class B to D notes can defer interest if the below conditions are satisfied:

The class is not the most-senior class; or

The debit balance on each class PDL is higher than 25% of the principal amount outstanding of the respective class.

Repayment of the notes and pro-rata mechanism

From closing, the issuer will redeem the notes sequentially until the class A subordination has increased to 11% from 6.5% at closing. Once the target credit enhancement level has been reached, the class A to D notes will switch to pro rata paydown.

Moreover, the transaction will switch back to sequential paydown if there is a sequential payment trigger event, which is hit if:

- The cumulative net loss ratio exceeds 1.50%;
- The class E notes' PDL has been fully booked; or
- The aggregate outstanding portfolio balance falls below 10% of original outstanding portfolio balance.

Clean-up call

BDK can exercise a clean-up call as soon as the aggregate outstanding portfolio balance falls below 10% of the aggregate outstanding portfolio balance at closing. If BDK exercises this option, the notes will fully redeem (including accrued interest).

Interest priority of payment

On any monthly interest payment date, Red & Black Auto 7 will apply to the interest waterfall the sum of the following payments that it received on the preceding month:

- Interest collections;
- Recovery collections;
- Net swap receipts;
- Interest accrued on bank accounts and reserve accounts;
- Amounts on the seller risk reserve, which applies only if the servicer as of the previous payment date has failed to transfer received interest collections or if the seller fails to pay the issuer any deemed collections relating to interest collections resulting from setoff claims declared by the debtor;
- Any amounts it has transferred from the principal waterfall via the principal borrowing mechanism; and
- Amounts on the liquidity reserve.

Table 5

Simplified Interest Priority Of Payments

1	Statutory claims
2	Senior fees and admin expenses
3	Servicing fees
4	Swap payments
5	Interest on the class A notes
6	Interest on the class B notes (if not deferred)
7	Interest on the class C notes (if not deferred)
8	Interest on the class D notes (if not deferred)
9	Top-up the liquidity reserve to the required amount
10	Clear class A PDL
11	Clear class B PDL
12	Clear class C PDL
13	Clear class D PDL
14	Clear class E PDL
15	Interest on the class B notes (if deferred)
16	Interest on the class C notes (if deferred)
17	Interest on the class D notes (if deferred)
18	Interest on the class E notes
19	subordinated swap termination payments
20	Interest on the subordinated loan

Table 5

Simplified Interest Priority Of Payments (cont.)

21	Subordinated loan redemption amount
22	Other junior expenses

Principal priority of payment

On any monthly IPD, Red & Black Auto 7 will apply to the principal waterfall the sum of the following collections that it has received during the preceding month:

- Principal collections (including prepayments and deemed collections);
- Any amounts it has transferred from the interest waterfall via the principal deficiency ledger mechanism; and
- Amounts on the seller risk reserve, which apply only if the servicer as of the previous payment date has failed to transfer received principal collections or if the seller fails to pay the issuer any deemed collections relating to principal collections resulting from setoff claims declared by the debtor.

Table 6

Simplified Principal Priority Of Payments

1	Principal borrowed to cure shortfalls of senior expenses and interest on class A to D notes (if not deferred)
2	Class A notes redemption amount (sequential or pro rata)
3	Class B notes redemption amount (sequential or pro rata)
4	Class C notes redemption amount (sequential or pro rata)
5	Class D notes redemption amount (sequential or pro rata)
6	Class E notes (only once class A to D notes have been redeemed in full)

The interest accrued on monies held in the issuer account bank with Elavon Financial Services DAC will not incorporate a floor. In a negative interest rate environment, the issuer would be exposed to additional costs. In our cash flow assumption, we have additionally stressed for interest payments to the issuer account bank provider, with the interest rates falling to -1.0% over the weighted-average life.

Excess spread

Excess spread will result from the difference between the interest income received from the assets and the interest paid to the noteholders, plus any senior fees and expenses. The excess spread will be used to cure defaults after the replenishment of the reserve. At closing, we estimate the unstressed excess spread will be about 2.6%.

Cash reserve

At closing, the originator will fund through the subordinated loan an amortizing liquidity reserve equal to 0.50% of the closing balance of the class A to D notes. The liquidity reserve amortizes in line with 0.50% of the class A to D notes' outstanding amount with a floor of 0.15% of the initial amount of the class A to D notes.

The liquidity reserve will serve as a liquidity buffer to cover any potential shortfalls in the payment of senior costs and expenses and interest on the class A to D notes, but they cannot be applied for the class B to D notes' interest if the respective interest deferral trigger is hit. Any excess of the reserve over the required amount will flow through the interest waterfall and will be available to cure any PDL.

Interest rate hedging

At closing, the issuer and the swap counterparty will enter into four fixed-to-floating interest swap agreements--one for each class A to D--to hedge the risk between the fixed rate of interest paid by the assets and the floating rate of interest payable on the notes.

Under these swap agreements, the issuer will pay a fixed rate to be determined on the swap notional. In exchange, the swap counterparty will pay to the issuer a floating interest rate based on one-month EURIBOR (i.e., the same index that the notes pay) plus the respective class note margin on same swap notional.

The floating interest rate under the swap agreement is floored at zero. The coupons on the notes will also be floored at zero. Hence, the swap will not be exposed to any unhedged costs..

Mitigation Of Seller Risks

Commingling risk

Commingling risk may arise if the servicer becomes insolvent and if collections at that time in the servicer's collection accounts, plus collections received afterward until borrowers are notified to redirect their payments into the issuer account, become commingled with the insolvent servicer monies.

The servicer will sweep collections to the issuer monthly. BDK will be scheduled to receive collections on the loan receivables either on the first day (66.3%) or the 15th day (33.7%) of the month. BDK will have direct debit arrangements for all receivables of the pool. We assume collections from the previous month and the first (66.3%) of the two monthly collection dates to be commingled.

Société Générale will pay missed collections to the issuer account if the servicer fails to transfer collections to the issuer on the transfer date. The amount to be paid by Société Générale is the lower of the total sum of missed collections and a predefined maximum amount.

Setoff risk

A substantial share of the contracts was sold together with insurance products, and the loans can finance the insurance. BDK paid the insurance premium upfront to the insurer. Under the transaction documents, the borrower's right to reduce the installments by an amount equal to the premium related to the 'unused' insurance protection cannot be excluded if BDK and the insurer become insolvent at the same time. We consider the set-off risk to be limited, for which the insurance provider is a third party and independent from BDK. Based on the information provided, we determine about 1% of unused insurance premiums as potential setoff risk, as this portion relates to Société Générale Insurance, a 100% subsidiary of Société Générale, which is a related third party to BDK.

Société Générale will fund the combined commingling and setoff reserve up to the relevant maximum amount within 30 days if the long-term rating on Société Générale falls below 'BBB', or promptly if BDK becomes insolvent. We have used the above inputs and stressed assumptions on commingling risk and setoff risk we would expect at the relevant rating levels. The commingling reserve fund will fully mitigate the transaction's combined exposure to commingling risk and setoff risk.

The table below shows the maximum amount in relation to the date:

Table 7

Maximum Amount Paid By Société Générale

From (and including)	To (and excluding)	Maximum Amount (€)
Closing date	15/11/2021	60,000,000
15/11/2021	15/11/2022	55,000,000
15/11/2022	15/11/2023	50,000,000
15/11/2023	15/11/2024	40,000,000
15/11/2024	15/11/2025	31,000,000
15/11/2025	15/11/2026	20,000,000
15/11/2026	15/11/2027	12,000,000

Cash Flow Analysis

Table 8

Cash Flow Assumptions

Recession start	Closing
Length of recession	Weighted-average life (30 months)
Cumulative gross loss curve	Evenly distributed and back-loaded over weighted-average life
Recovery lag	13 months
Delinquency	Two-thirds of credit losses recovered six months later
Payment holidays (COVID-19 liquidity stress)	Delay for 4% of the collections in first six months, starting in month one, and recovered over six months following WAL
Stressed servicing fees (%)	1.0
Fixed fees (€)	100,000
Prepayments (high/low) (%)	24.0/0.5
Interest rate	Up: current to 12% with 2% monthly increaseDown: current to 0% with 2% monthly decreaseFlat: at current level
WAC (%)*	3.49
Commingling stress	Mitigated through a dedicated reserve.

Table 8

Cash Flow Assumptions (cont.)

Recession start	Closing
Setoff loss	Mitigated through a dedicated reserve

*Calculations are according to S&P Global Ratings' methodology.
WAC--Weighted-average coupon before spread compression.

We have tested the classes' ability to pay timely interest and ultimate principal on the class A to D notes under the above stress assumption through a cash flow model. The model incorporates the payment structure, including the notes' sequential/pro rata amortization feature and the liquidity reserve's amortizing nature.

Based on the assumptions discussed above, the high prepayment, and equally-loaded default scenarios have proved to be more stressful, mostly because they reduce the amount of available excess spread.

Our analysis indicates that the available credit enhancement is sufficient to withstand the credit and cash flow stresses that we apply at the 'AAA' rating for the class A notes, 'AA+' rating for the class B notes, 'A' rating for the class C notes, and 'BBB' rating for the class D notes.

To account for the notes' sequential/pro rata amortization feature, we have also tested the structure's sensitivity to back-loaded loss timing. Due to the tight sequential payment triggers in relation to cumulative net losses and class E PDL, we found that the transaction does not switch to pro rata redemption in our higher rating scenarios.

Sovereign Risk

Our long-term unsolicited credit rating on Germany is 'AAA'. Therefore, our structured finance sovereign risk criteria do not constrain our ratings in this transaction (see "Incorporating Sovereign Risk In Rating Structured Finance Securities," published on Jan. 30, 2019).

Scenario Analysis

We analyzed the effect of a moderate stress on the credit variables and its ultimate effect on our ratings on the notes. We ran two stress scenarios to demonstrate the rating transition of a note (see tables 9 and 10).

Table 9

Recovery Rates

	Recovery rate base case (%)		
Gross default rate base case (%)	0%	(10%)	(30%)
0%	Base Case	3	4
10%	1	5	7
30%	2	6	8

Table 10

Sensitivity Analysis

	Base Case	1	2	3	4	5	6	7	8
A	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA	AAA
B	AA+	AA	A+	AA	AA	AA	A+	AA-	A
C	A	A-	BBB+	A	A	A-	BBB	A-	BBB
D	BBB	BBB	BB-	BBB	BBB	BBB	B+	BB+	B
E	NR	NR	NR	NR	NR	NR	NR	NR	NR

The results of the above scenarios are in in line with our credit stability criteria. Many of this transaction's features--including the initial subordination levels, excess spread, and the general reserve--enhance the stability of the ratings under each scenario.

Monitoring And Surveillance

We will assess quarterly the underlying portfolio's performance, including defaults, delinquencies, and payment holidays.

Additionally, we will also assess annually:

- The supporting ratings;
- The servicer's operations and its ability to maintain minimum servicing standards; and
- Whether the then-available credit enhancement for each class of notes is sufficient to withstand losses that are commensurate with the preliminary ratings assigned.

Appendix

Transaction participants

Transaction Participants

Issuer	Red & Black Auto Germany 7 UG (haftungsbeschränkt)
Originator, seller, and servicer	Bank Deutsches Kraftfahrzeuggewerbe GmbH
Arranger and lead manager	Société Générale S.A.
Corporate administrator	Intertrust (Deutschland) GmbH
Cash administrator and interest determination agent	U.S. Bank Global Corporate Trust Ltd.
Paying agent	Elavon Financial Services DAC
Trustee and data trustee	Intertrust Trustees GmbH
Swap provider	DZ BANK AG
Bank account provider and paying agent	Elavon Financial Services DAC

Related Criteria

- Criteria | Structured Finance | General: Counterparty Risk Framework: Methodology And Assumptions, March 8, 2019
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- General Criteria: Principles Of Credit Ratings, Feb. 16, 2011
- Criteria | Structured Finance | General: Methodology For Servicer Risk Assessment, May 28, 2009

Related Research

- European Auto ABS Index Report Q2 2020, Sept. 8, 2020
- European Short-Time Work Schemes Pave The Way For A Smoother Recovery, May 20, 2020
- European Auto And Consumer ABS: Analysis Adjusted To Reflect COVID-19 Effects, May 11, 2020
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