S&P Global
Ratings

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New Issue: RevoCar 2020 UG (haftungsbeschraenkt)

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Ratings Detail

Ratings Assigned

Class	Rating*	Amount (mil. €)	Note balance (%)	Available credit enhancement (%)	Interest (%)	Legal final maturity
A	AAA (sf)	717.3	89.7	10.3	0.20	June 2035
B-Dfrd	A (sf)	34.5	4.3	6.0	1.50	June 2035
C-Dfrd	BBB (sf)	16.5	2.1	4.0	3.25	June 2035
D-Dfrd	BB- (sf)	10.7	1.3	2.6	5.75	June 2035
E-Dfrd	NR	21	2.6	N/A	11.00	June 2035

*Our ratings on the class A notes address the timely payment of interest and ultimate payment of principal, while our ratings on the class B-Dfrd, C-Dfrd, and D-Dfrd, notes address the ultimate payment of interest and principal no later than the legal final maturity date. NR--Not rated. N/A--Not applicable.

Supporting Ratings

Institution/role	Rating	Replacement trigger	Collateral posting trigger
The Bank of New York Mellon, Frankfurt Branch as the transaction accounts provider*	AA-/Stable/A-1+	A	N/A

The replacement language in the documentation is in line with our counterparty criteria (see "Counterparty Risk Framework: Methodology And Assumptions," published on March 8, 2019). For a full list of transaction participants, please refer to the appendix. N/A--Not applicable *Based on the ratings on the parent company, The Bank of New York Mellon. N/A--Not applicable.

Transaction Summary

S&P Global Ratings has assigned its credit ratings to RevoCar 2020 UG (haftungsbeschränkt)'s notes.

The collateral in RevoCar 2020 comprises German auto loan receivables that Bank11 für Privatkunden und Handel GmbH (Bank11) originated and granted to private (97%) and commercial customers (3.0%) for the purchase of new (50.0%) and used vehicles (50.0%), primarily cars. The portfolio also includes 0.9% of loans for motorbikes and leisure vehicles. This transaction is Bank11's eighth German public ABS securitization. The transaction is revolving for a maximum period of 24 months.

According to the transaction's terms and conditions, interest can be deferred on any class of notes, except for the class A notes if the undercollateralization of the relevant class exceeds a certain threshold. Furthermore, there is no compensation mechanism that would accrue interest on deferred interest, and all previously deferred interest will not be due immediately when the class becomes the most senior. Considering the abovementioned factors, we have assigned ratings that address the ultimate payment of interest and principal on the class B-Dfrd, C-Dfrd, and D-Dfrd notes based on our interest shortfall methodology (see "Structured Finance Temporary Interest Shortfall Methodology," published Dec. 15, 2015). Our rating on the class A notes instead addresses the timely payment of interest and ultimate payment of principal.

Our ratings reflect our analysis of the transaction's payment structure, its exposure to counterparty and operational risks, and the results of our cash flow analysis to assess whether the rated notes would be repaid under stress test scenarios.

A liquidity reserve provides only liquidity support to interest on the class A notes, if the servicer fails to transfer collections to the special-purpose entity (SPE) following a servicer termination event.

The transaction features a combined waterfall. The notes will amortize sequentially when the revolving period ends.

Our ratings in this transaction are not constrained by the application of our sovereign risk criteria for structured finance transactions or our counterparty risk criteria. The application of our operational risk criteria does not cap the ratings in this transaction (see "Related Criteria").

At closing, RevoCar 2020 issued unrated class E-Dfrd subordinated notes, which provide credit enhancement to the class A through D-Dfrd notes because the tranche ranks below the other classes of notes for the payment of interest and principal.

The pool comprises auto loans with equal fixed installments during the contract's life ("EvoClassic"). "EvoSupersmart" and "EvoSmart" receivables contain balloon payments at the end of the promotion period. According to the pool, 56% of the closing principal balance are EvoSupersmart contracts and 8.5% are "EvoSmart" contracts. Overall, considering both balloon products, the share of the balloon component is 38.8% of the total pool. More specifically, the balloon component of EvoSmart only contracts is 53.6%, whereas for EvoSupersmart, it is 61.1%.

Table 1

Capital Structure As Of Closing

	Note balance (%)	Available credit enhancement (%)
Total class A	89.7	10.3
Total class B	4.3	6.0
Total class C	2.1	4.0
Total class D	1.3	2.6
Total class E	2.6	0

The Credit Story

Strengths

- This is the bank's eighth German publicly-rated ABS transaction, of which we've rated the first three and the latest RevoCar 2019-2. The previous rated transactions have performed well and in line with our expectations.
- At closing, the portfolio does not contain receivables, which are subject to payment holidays due to COVID-19.
- The portfolio is highly granular and well-diversified across Germany's federal states and by vehicle brands. As of the pool cut-off date, the largest single obligor represented about 0.02%, and the top 15 obligors comprised 0.19% of the portfolio.
- Bank11 has nine years of business experience and is one of the largest non-captive car financing companies in

Germany. In our view, Bank11 has established itself as an experienced originator and servicer in the German securitization markets.

- The class A notes benefit from a nonreplenishing liquidity reserve, which the originator fully funded at closing. The liquidity reserve provides liquidity support to mitigate any interest shortfall on those classes of notes if the servicer fails to transfer collections to the SPE following a servicer termination event. It is not applied for curing interest shortfalls on the class B-Dfrd, C-Dfrd, and D-Dfrd notes.

Concerns and mitigating factors

- The transaction is revolving, meaning that subject to certain conditions, the originator may sell further receivables to the issuer during the 24-month revolving period. Therefore, the portfolio composition after the revolving period may not match the original composition if the issuer buys additional receivables. As a mitigating factor, the transaction documents set certain performance triggers to terminate the revolving period to prevent any significant deterioration in the portfolio quality. We have also considered the long revolving period when sizing our stress multiple.
- No back-up servicer was in place at closing. The combination of a borrower notification process, a liquidity reserve, a commingling reserve, and the general availability of substitute servicers, will mitigate servicer disruption risk.
- At closing, the pool comprised of 56% EvoSupersmart receivables, 35.5% of EvoClassic receivables, and 8.5% of EvoSmart receivables. Specifically to the EvoSupersmart contracts and in line with our analysis for RevoCar 2019-2, we have considered these as balloon contracts, as in our scenarios the servicers would be insolvent and all contracts would be terminated before the end of their promotion period. Upon termination, the remaining outstanding principal balance becomes payable after a six months' notice period and the obligor must pay the final installment. The balloon payment at maturity could result in a payment shock to the borrower, compared with equally amortizing loans. We have sized the additional losses resulting from payment shock after a market value decline of the underlying vehicles.
- We do not rate the seller, Bank11. It also services the receivables, which might result in commingling risk if the bank becomes insolvent, because collections from the assets are channeled through Bank11's collection accounts. A commingling cash reserve established at closing only partially mitigates the commingling risk because it allows for a reduction of the funded portion for any build-up of credit enhancement. We have considered the transaction's exposure to commingling risk and the amortizing commingling reserve in our cash flow analysis.

Asset Description

As of the cut-off date, the collateral pool backing the notes comprised 53,837 loans, with a total current principal balance of €800 million. The portfolio comprises auto finance receivables granted for the purchase of used (50.0%) and new vehicles (50.0%), originated by Bank11 mainly to its private clients (97.0%).

At closing, the securitized pool complied with the eligibility criteria. The securitized pool consists of three product types of loans, which differ in repayment profile and original term.

The "EvoClassic" loans have an original term between 12 and 120 months and are fully amortizing and a down payment from the borrower can reduce their total loan volume.

The "EvoSmart" loans have original term between 13 and 120 months and entail a balloon component at the contract end.

The "EvoSupersmart" loans have an initial promotion period of 13 to 61 months, during which the monthly installments are subject to a fixed interest rate and a post-promotion period. After the promotion period, the borrower may either make a full balloon repayment or continue to pay monthly installments. The interest rate during the post-promotion period is an adjustable interest rate that may be changed quarterly based on a change in the European Central Bank's (ECB) interest rate. The monthly installments payable during the post-promotion period are at least equal to 1.5% of the outstanding loan amount at the end of the promotion period. Furthermore, the borrower is entitled to make further drawings under the loan agreement subject to certain conditions, in particular, the expiry of the promotion period and a repayment of at least 50% of the initial loan amount. In order to mitigate the risk of the top-up facility to the SPE there are certain mitigants in place:

- As long as Bank11 is the servicer, it will re-rate the borrower before the end of the promotion period. If the borrower's creditworthiness is assessed as sufficiently high (not at risk), Bank11 will (a) during the revolving period replace the loan principal balance outstanding with new eligible loan collateral equal to the outstanding loan principal balance; and (b) after the revolving period transfer the outstanding loan principal balance as principal collection to the issuer. If it is assessed as a risky loan, Bank11 will terminate the contract with six months' notice, and it will remain an amortizing fixed installment loan (for the remaining six months). The remaining outstanding principal balance becomes payable after the six months' notice period and the obligor must pay the final installment.
- Following a servicer termination event, Bank11 will terminate all EvoSupersmart contracts with a promotion period ending within the next three months and notify borrowers that their loans have been terminated. If the servicer fails to terminate the loans, the substitute servicer facilitator will terminate the contracts. All remaining contracts will be terminated prior to their end of promotion period by either the substitute servicer facilitator or the then appointed replacement servicer.

Based on this mechanism, we have treated EvoSupersmart contracts in our analysis as similar to balloon loans, because we would assume Bank11 to be insolvent and all contracts to be converted into amortizing fixed installment loans with a balloon payment due after the end of the six-month notice period.

The largest single borrower concentration is under 0.02%, the top 15 borrowers comprise 0.19% of the portfolio, and the average outstanding balance is approximately €14,860. As a noncaptive lender, Bank11 finances a variety of vehicle manufacturers. The three largest manufacturers in the portfolio represent only 29.0% of the pool's balance.

Table 2

Collateral Distribution Of The Pool And Pool Characteristics

	RevoCar 2020	**RevoCar 2019-2**	**RevoCar 2016**	**RevoCar 2015**
Originator	Bank11 für Privatkunden und Handel GmbH	Bank11 für Privatkunden und Handel GmbH	Bank11 für Privatkunden und Handel GmbH	Bank11 für Privatkunden und Handel GmbH
Country	Germany	Germany	Germany	Germany
Type of assets	Auto loans	Auto loans	Auto loans	Auto loans
Pool cut-off date	May 31, 2020	Sept. 30, 2019	Feb. 27, 2016	Feb. 27, 2015
Closing date	June 10, 2020	Oct. 24, 2019	March 17, 2016	March 31, 2015
Aggregate discounted principal balance outstanding (mil. €)	800	500	550	346.2

Table 2

Collateral Distribution Of The Pool And Pool Characteristics (cont.)

	RevoCar 2020	RevoCar 2019-2	RevoCar 2016	RevoCar 2015
Weighted-average customer interest rate (%)	3.10	3.12	3.17	4.37
Weighted-average original term (months)	57.1	54.9	55	41.6
Weighted-average remaining term (months)	47.5	45	47.1	31.6
Weighted-average seasoning (months)	9.6	9.8	7.9	10
Largest borrower (%)	0.02	0.03	0.02	0.05
Top 15 borrower concentration (%)	0.19	0.29	0.3	0.37
Geographic concentration (%)	21.0 (North Rhine Westfalia)	20.9 (Bavaria)	21.7 (North Rhine Westfalia)	24.0 (North Rhine Westfalia)
Top 3 manufacturer concentration (%)	29	28.2	23	25.2
Vehicle type (%)				
Share of new vehicles	50	46	60.2	63.3
Share of used vehicles	50	54	39.8	36.7
Customer type (%)				
Private	97	96.4	96.2	97.3
Corporate	3	3.6	3.8	2.7
Product type (%)				
EvoClassic	35.5	25	35.8	61.6
(fully amortizing)				
EvoSmart (standard balloon)	8.5	0	7.4	38.4
EvoSupersmart	56	75	56.8	

Chart 1

Scheduled Amortization Of The Securitized Pool

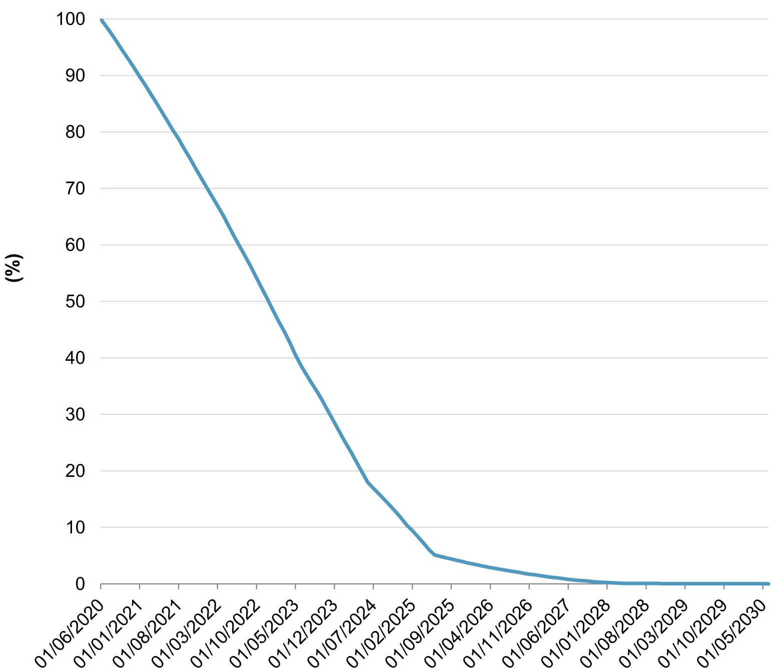
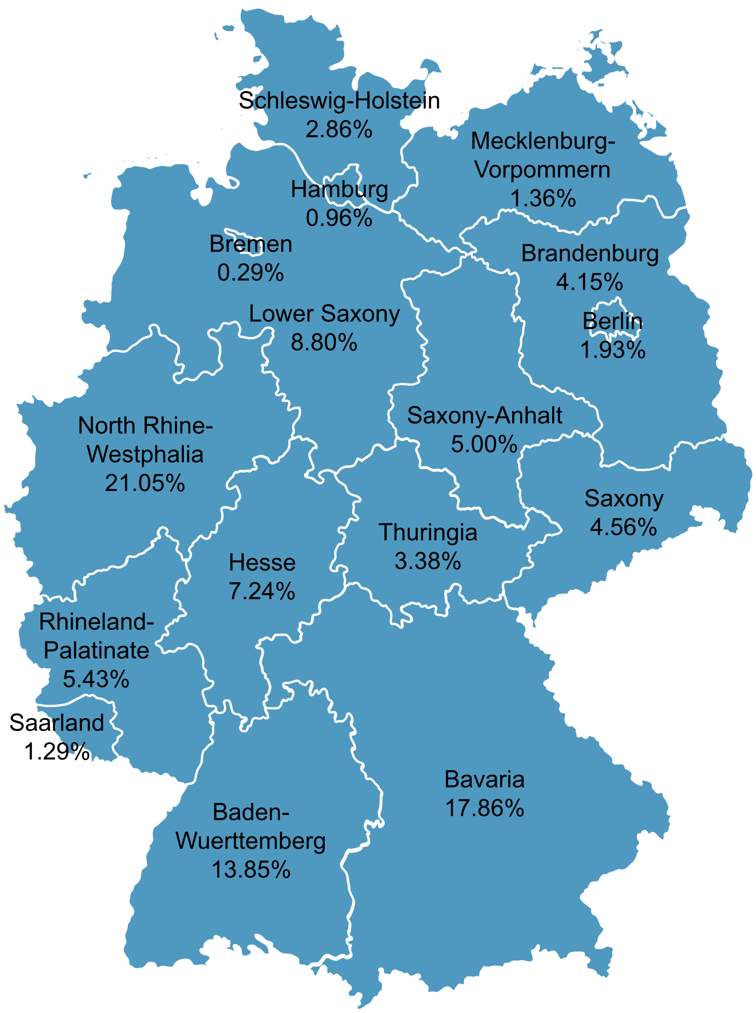


Chart 2

Geographical Distribution Of The Pool



Originator And Servicer

Bank11 was founded in 2011 and is headquartered in Neuss. It is a small bank with a strong business focus on providing auto loans to private and commercial customers, and to a smaller extent, car dealer financing and consumer credit. Bank11 is an indirect subsidiary of Wilh Werhan KG, a family owned German conglomerate with a diversified business portfolio, mainly operating in building materials, financial services, and consumer goods.

Since its foundation, Bank11 has gained substantial market share in the German non-captive car financing market. Bank11 is now the second largest non-captive car financing company in Germany, after Santander Consumer Bank

AG.

Bank11 originates most of its new loan business through its sale partners, including, among other things, car dealers and online platforms for vehicle loans, and automobile clubs. In addition, a small portion is originated through Bank11's direct online channel. We understand that direct online business with Bank11's own platform ("autowunsch.de") will not be part of the portfolio.

In 2019, total car financing origination volume totaled €1.6 billion, compared with €1.2 billion in 2018, €997 million in 2017, €742 million in 2016, and €596 million in 2015. The growing new car financing is reflected in Bank11's total balance sheet, which increased to €3.6 billion, compared to €2.9 billion in 2018, €2.3 billion in 2017, and €1.9 billion in 2016. About 70% of Bank11's refinancing is sourced via deposits from private and institutional customers.

It is a licensed bank in Germany and is therefore regulated by the German regulatory authority (BaFin).

Underwriting policy

During the underwriting process, we understand that Bank11 checks the customer credit reference for private customers with SCHUFA and with CreditReform for commercial customers, both German credit bureaus. The vehicle serves as collateral for the loan. To mitigate the risk of a fraudulent sale of the vehicle, Bank11 or a third party on behalf of Bank11 stores the vehicle registration documents. In line with the underwriting policy, Bank11 has the option to waive the handover of the vehicle registration documents in the future, if a debtor fulfills certain criteria. These criteria include, among other things, credit and fraud scores and borrower types. We understand that for about 50% of the portfolio the relevant debtors would meet these criteria.

The arrears collection process starts automatically through reminders generated by the system, and a specialist company quickly handles the vehicle repossessions. If repossession and/or full recovery is not possible, we understand that Bank11 would initiate legal action.

Servicing policy

On the issuer's behalf, Bank11 is responsible for the daily administration and servicing of the securitized portfolio and for the recovery of loans in accordance with its internal policy. We have considered Bank11's ability to service the portfolio under our operational risk criteria, and we are satisfied with its ability to perform its functions in the transaction. Consequently, our operational risk criteria do not constrain the maximum potential rating assignable to the transaction.

As part of our analysis, we conducted an on-site visit to Bank11's headquarters in 2019 and an update call in May 2020 for the purpose of this transaction. We are satisfied that the underwriting and servicing standards are in line with other players in the German auto loan market. Upon servicer insolvency, the substitute servicer facilitator, Wilmington Trust SP Services (Frankfurt) GmbH, assists the issuer in finding a suitable replacement servicer within 90 calendar days.

Credit Analysis

Our analysis includes an assessment of the credit risk inherent in the transaction under various stress scenarios. We based our credit analysis on our European auto loan criteria, using historical gross loss data from the originator's loan book (see "Related Criteria").

We have received monthly static gross loss data from January 2013 to Februrary 2020 for EvoClassic and EvoSmart loans and from February 2013 (when EvoSupersmart was introduced) to Februray 2020 for EvoSupersmart loans. Gross losses include contracts that are more than three installments overdue, contracts where the related vehicle has been repossessed, insolvent customers, or contracts terminated by Bank11. This data was provided for various subportfolios, such as products (EvoClassic, EvoSmart, and EvoSupersmart), vehicle type (new and used), and loan-to-value (LTV) ratio buckets. In addition, we have received for the same subportfolios monthly dynamic delinquency data based on Bank11's book, as well as recent performance reports for predecessor transactions, including those we have not rated.

We have based our analysis on the subportfolios by product type: EvoClassic, EvoSmart, and EvoSupersmart.

Macroeconomic and sector outlook

The economic costs of the coronavirus 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 7.3% in the eurozone this year, with a gradual rebound of 5.6% in 2021. We assume a lockdown of eight weeks with a very gradual exit. We see larger economic risks, as outbreaks could resurge when lockdowns are loosened across the globe. In our base-case scenario for Germany, we forecast economic growth to decrease by 6.0% this year and rebound in 2021 by 4.3%. In 2022 and 2023, we forecast GDP growth of 3.3% and 1.6%. At the same time, we expect unemployment rates to increase to 3.6% in 2020 and 3.8% in 2021, compared with 3.2% 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 rate of spread and peak of the coronavirus outbreak. Some government authorities estimate the pandemic will peak about midyear, and we are using this assumption in assessing the economic and credit implications. We believe the measures adopted to contain COVID-19 have pushed the global economy into recession (see our macroeconomic and credit updates here: www.spglobal.com/ratings). As the situation evolves, we will update our assumptions and estimates accordingly.We will investigate the potential effects the current recession may have, especially on lower rating categories. For this specific transaction and in line with our research article "European Auto And Consumer ABS: Analysis Adjusted To Reflect COVID-19 Effects," we have added 25 basis points to the weighted-average base-case we obtained following our standard approach and we prolonged the recovery timing.

In our analysis, we considered the following economic data and their baseline effect on collateral credit quality in determining our credit assumptions (see "Related Research").

Table 3

Economic Factors

	Actual	Forecast			
	2019	**2020f**	**2021f**	**2022f**	**2023f**
Real GDP (y/y growth, %)	0.6	(6.0)	4.3	3.3	1.6

Table 3

Economic Factors (cont.)

	Actual	Forecast			
	2019	**2020f**	**2021f**	**2022f**	**2023f**
Unemployment rate (annual average, %)	3.2	3.6	3.8	3.6	3.5
CPI YoY (%)	1.4	1.0	1.2	1.3	1.4

Sources: National statistics offices, OECD, Eurostat, Bank of England, European Central Bank, S&P Global Ratings. CPI--Consumer price index. f--Forecast.

Defaults

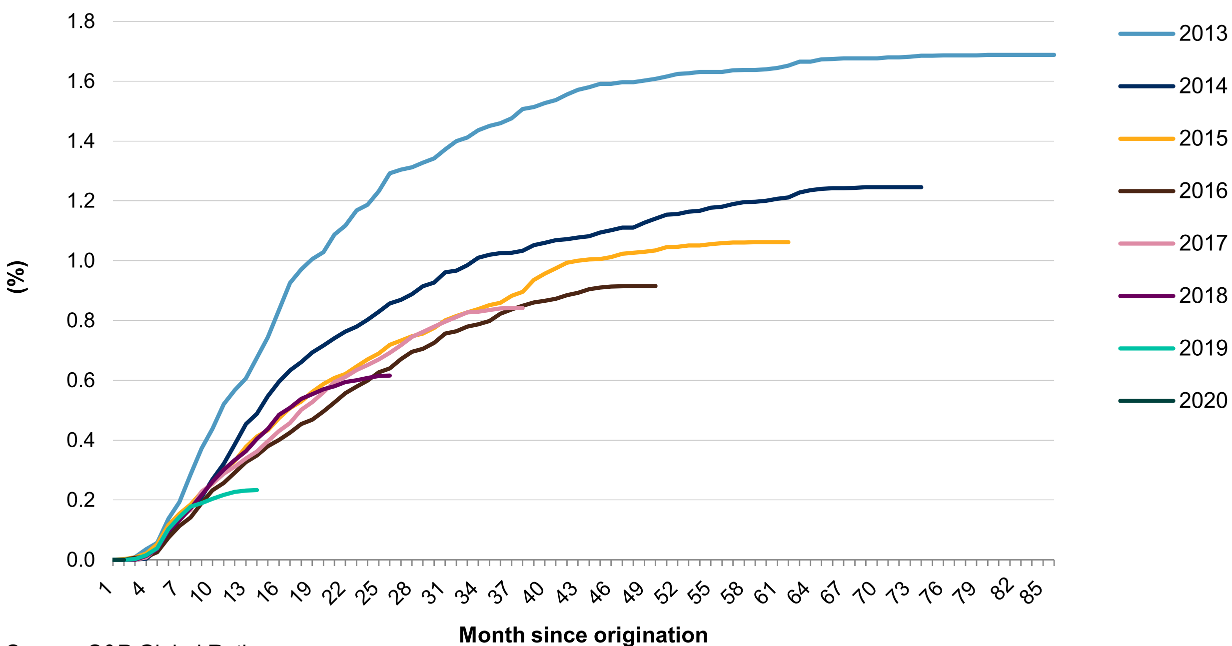
We analyzed the performance data provided by the originator at the subpool level, split by products EvoClassic, EvoSmart, and EvoSupersmart. Bank11 provided more than seven years of historical data (both static and dynamic) for all products. However, the historical data do not fully cover the assets' maximum original term of the EvoClassic product, which is up to 120 months. At closing, about 9% of the total pool contained contracts with a maximum original term that exceeded seven years. We have taken this into account when sizing our gross base-case for EvoClassic.

A portion of the portfolio has been originated through sales partners, such as cooperation partners like automobile clubs, which have not been securitized in previous transactions. We have been provided with historical performance data and portfolio stratifications for these new sales partners. In our view, we expect the credit performance to be comparable to the overall portofolio and we have not stressed this separately.

Charts 3, 4, and 5 show the historical cumulative gross losses, by year of origination.

Chart 3

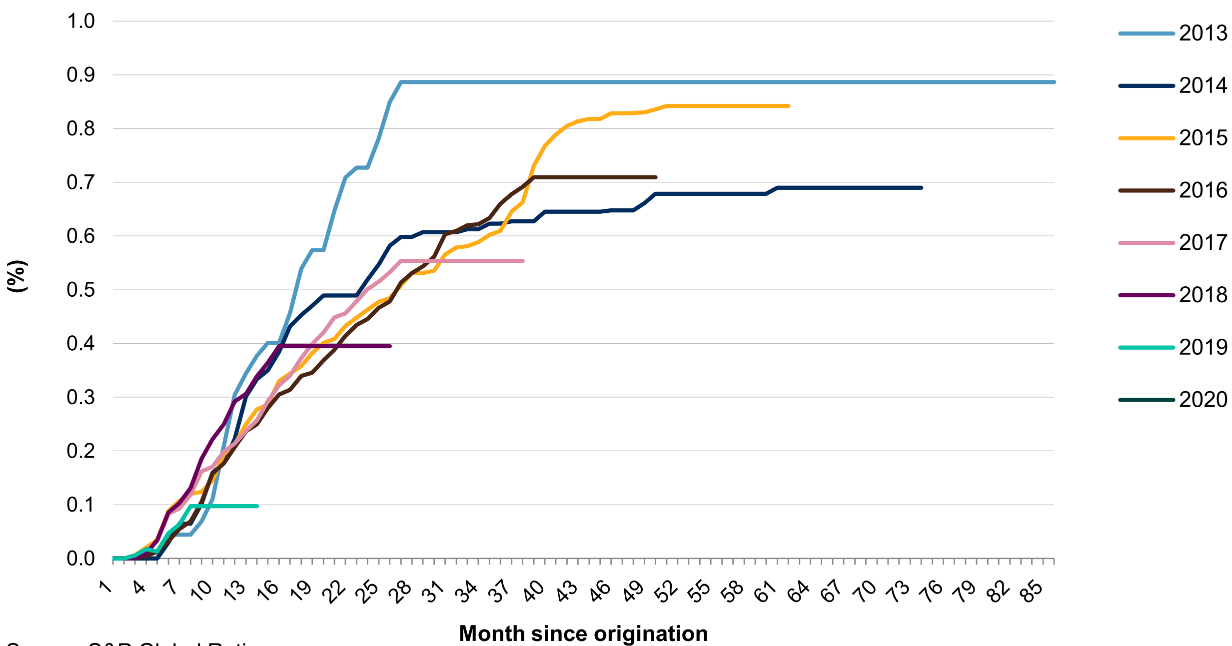
Cumulative Annual Gross Loss Curves For Total Portfolio



Source: S&P Global Ratings.

Chart 4

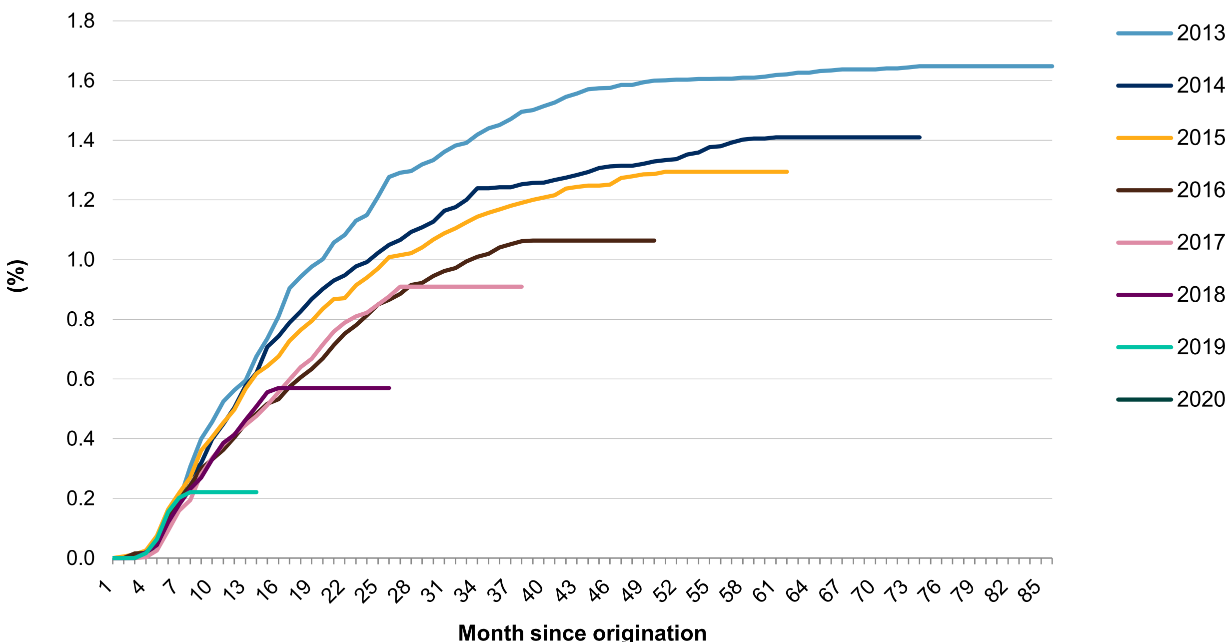
Cumulative Annual Gross Loss Curves For EvoSupersmart



Source: S&P Global Ratings.

Chart 5

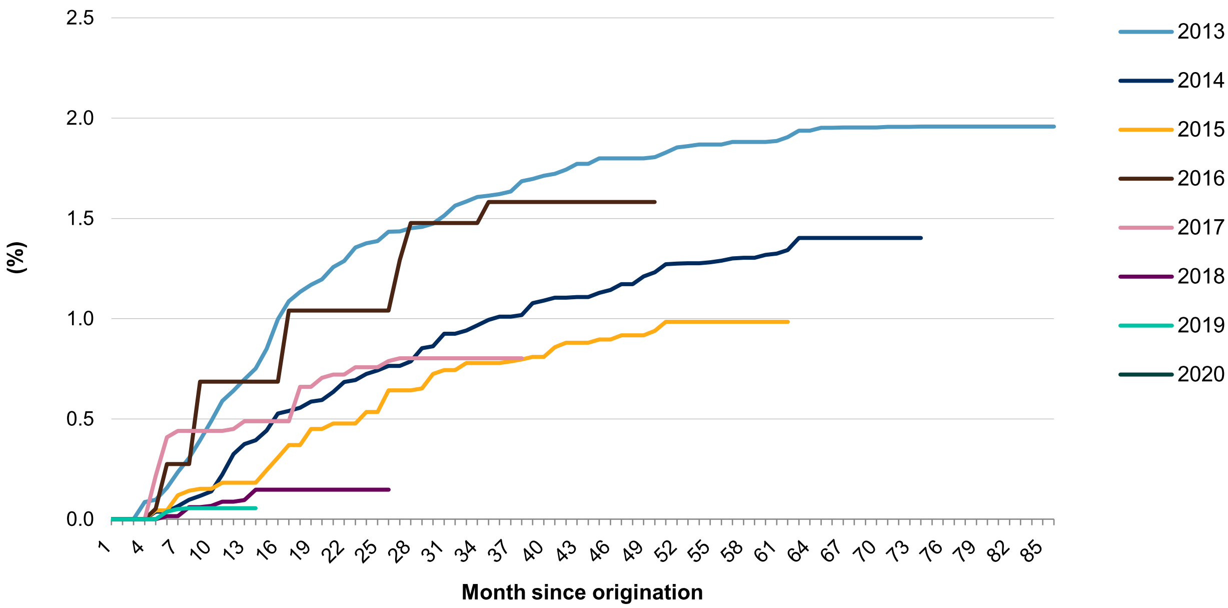
Cumulative Annual Gross Loss Curves For EvoClassic



Source: S&P Global Ratings.

Chart 6

Cumulative Annual Gross Loss Curves For EvoSmart



Source: S&P Global Ratings.

In light of our current recessionary outlook for Europe, we have increased our base-case default rate assumption for EvoClassic and EvoSupersmart by 0.25% to 2.25%, compared to Revocar 2019-2. Additionally, we have sized a base-case default rate assumption of 3.25% for EvoSmart products. In our view, government actions taken so far to bolster European economies from the effects of COVID-19 will support ABS performance. Unemployment is one of the primary drivers for defaults in auto ABS, and many of the support measures, such as partial unemployment schemes, aim to prevent unemployment from spiking (see "European Auto And Consumer ABS: Analysis Adjusted To Reflect COVID-19 Effects," published 11 May 2020).

The replenishment limits during the two-year revolving period only floors the share of EvoClassic at 35%. Hence, in our analysis, we have assumed 35% EvoClassic in our worst case pool composition. For the remaining 65%, we assumed the total amount relates to EvoSmart as we size the higher base-case default rate assumptions for this product. Based on this, we derived our weighted-average cumulative base-case gross loss assumption of 2.90%, compared to 2.33% from the closing pool composition.

Table 4

Cumulative Gross Loss Base-case

	Closing pool (%)	Worst-case pool (%)	Cumulative gross loss base-case (%)
EvoClassic	35.50	35.00	2.25
EvoSmart	8.46	65.00	3.25
EvoSupersmart	56.04	0.00	2.25

Table 4

Cumulative Gross Loss Base-case (cont.)			
	Closing pool (%)	**Worst-case pool (%)**	**Cumulative gross loss base-case (%)**
Weighted-average closing pool			2.33
Weighted-average worst-case pool			2.90

Our multiples reflect the good data quality and quantity and Bank11's extensive experience as a servicer. In our view, this is partially offset by the above market average growth rates of origination volumes and the transaction's revolving period of two years.

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', respectively. At the same time, we kept our multiples unchanged for ratings below 'BBB' compared to Revocar 2019-2.

Recovery rates and recovery timings

Recoveries are a combination of vehicle sale proceeds, ancillary payments received from the borrowers, and recoveries from bad debt sales. Our stressed recovery assumption is 22.0% for investment-grade rating levels and 25.0% for speculative-grade rating levels.

Compared to RevoCar 2019-2, we lowered our stressed recovery rates assumptions for RevoCar 2020 as a significant portion of the debtors could keep the car registration documents. Under German law, if a debtor fraudulently sells the vehicle together with car registration documents, the purchaser could become the legal owner of the vehicle if he acts in good faith. In our view, this could create a risk of the SPE losing the title to those vehicles in such a scenario.

To reflect the expected disruptions to collection and workout efforts due to COVID-19, we extended our recovery lag to 24 months from 18 months.

Table 5

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	2.90	4.48	12.99	22	10.13
AA	2.90	3.56	10.34	22	8.06
A	2.90	2.65	7.69	22	5.99
BBB	2.90	1.78	5.17	22	4.03
BB	2.90	1.70	4.93	25	3.70
B	2.90	1.45	4.21	25	3.15

Balloon loan risk

Balloon contracts may introduce additional obligor default risk to the transaction, if we assume that obligors expect to be able to finance the final balloon payment through the sale of the vehicle at contract maturity. In a stressed economic environment, such obligors may default on the balloon payment because the market value of the vehicle could have declined to below the amount needed to pay the final balloon payment.

In addition to EvoSmart, we have also considered EvoSupersmart as balloon contracts, as in our scenarios, the servicers would be insolvent and all contracts would be terminated before the end of their promotion period. Upon termination, the remaining outstanding principal balance becomes payable after a six months' notice period and the obligor must pay the final installment.

Therefore, if an obligor defaults on the balloon payment, RevoCar 2020 will incur an additional loss equal to the difference between the balloon installment and the vehicle's sale proceeds. We have set our balloon loan gross loss assumption at a 'AAA' level at 9.0%, based on the significant diversification by brand and vehicle type, Bank11's balloon setting policy, and the overall size and concentration of maturing balloon payments.

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. As the pool is revolving, the balloon payment amount may change compared to closing. In our analysis, we have assumed a balloon payment portion of 40% of the total pool (65% of EvoSmart).

Table 6

Balloon Loss Assumptions—Closing Pool

Rating level	Balloon loss rate(%)
AAA	9.00
AA	7.60
A	4.70
BBB	2.80
BB	0.00
B	0.00

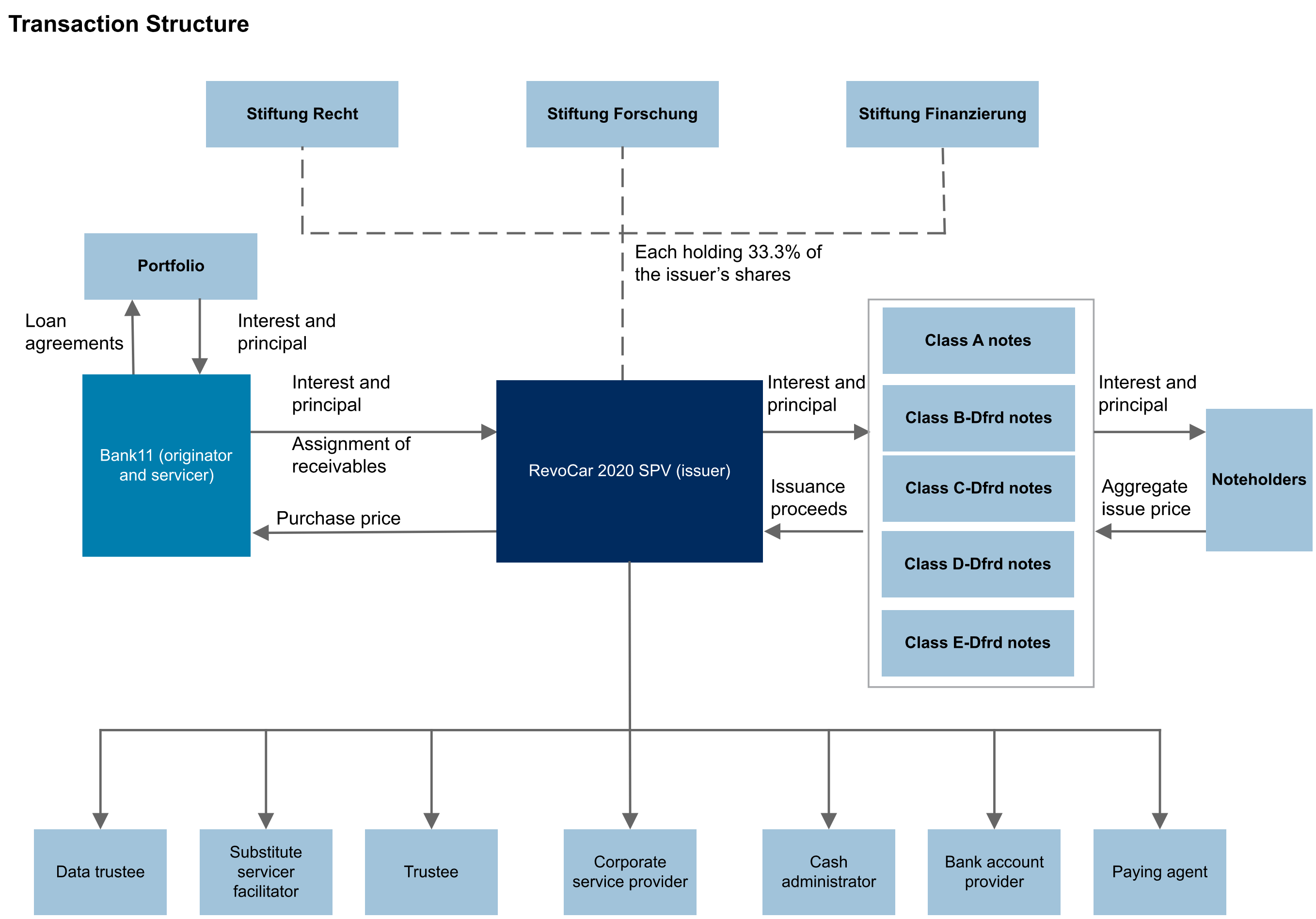
Prepayment

We have modeled the prepayment rate up to 24.0% and down to 0.5%.

Transaction Structure

At closing, the issuer purchased a pool of auto loan receivables from Bank11, and issues notes to fund such purchase (see chart 7).

Chart 7



RevoCar 2020 is a German SPE, 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). The transaction's legal opinion at closing confirms that the sale of the assets would survive the seller's insolvency.

Cash Flow Mechanics

The class A, B-Dfrd, C-Dfrd, and D-Dfrd notes are denominated in euros and pay interest at a fixed rate. The legal final maturity date is in June 2035.

Issuer available funds

The transaction has combined interest and principal payment waterfalls. The waterfall features a mechanism, by which the issuer can use excess spread to cure principal defaults. On any monthly interest payment date, RevoCar 2020 applies to the waterfall the sum of the following payments that it received on the preceding month:

- Interest collections;
- Principal collections;
- Recoveries;
- Any amounts on the replenishment account;
- Liquidity reserve on the payment date, which applies only if the servicer as of the previous payment date has failed to transfer received collections upon occurrence of a servicer termination event. Payments are only available to cover shortfalls down to the class A notes' interest;
- Commingling reserve on the payment date, which applies only if the servicer as of the previous payment date has failed to transfer received collections. Payments are only available to cover shortfalls down to the class E notes' principal; and
- Setoff risk reserve only if the seller fails to reimburse the issuer with any payments to compensate for a shortfall resulting from setoff risk declared by the debtor. Payments are only available to cover shortfalls down to the class E notes' principal.

Revolving period

During the revolving period, the issuer uses collections from the assets to purchase new receivables from the seller. The transaction revolves for 24 months ending in June 2022, as long as none of the early amortization events occurred.

Early amortization events

Following the occurrence of any of the following revolving period termination events, there would be a normal amortization period. There are various triggers related to the originator that will stop the revolving, such as insolvency or breach of obligations or termination of the servicer (apart from illegality), in addition the following events:

- On three consecutive payment dates, the amounts of principal available funds credited to the replenishment account exceed 10% of the outstanding note balance.
- The cumulative net loss ratio is greater than 0.3% from closing to month 12 post closing; 0.6% from month 13 to 24 post closing. This ratio is calculated as (i) aggregate balance of liquidating receivables, and (ii) divided by the outstanding principal balance of the initial portfolio plus additionally purchased receivables.
- The outstanding balance of all notes exceeds the sum of the outstanding principal balance of the current nondefaulted portfolio and amounts credited to the reinvestment replenishment account.
- An issuer event of default has occurred.
- A servicer termination event has occurred.

Eligibility criteria

The transaction documents set out certain eligibility criteria for the initial pool and for the subsequent subpools added during the revolving phase. We considered this in our cash flow analysis.

Common eligibility criteria

The features of the loans under the common eligibility criteria include:

- First installment has been collected;
- Granted to individuals resident in Germany;
- it is either an EvoClassic, an EvoSmart, or an EvoSupersmart receivable;
- The receivable has no installments in arrears and is not defaulted;
- The receivable has a remaining term of no more than 61 months for an EvoSupermart contract or no more than 120 months for the other two types of contracts;
- The loan contract was entered to finance a vehicle and the original loan amount does not exceed 150% of the vehicle sale price, and the balloon payment does not exceed 90% of the vehicle sale price;
- Payments are being made via direct debit;
- Originated in accordance with Bank11's credit and collection policy and is governed by Germany's laws;
- No borrower has a banking deposit with Bank11; and
- No credit-impaired borrower or guarantors are included.

New purchase portfolio eligibility criteria

The concentration limits of the loans under the new purchase portfolio eligibility criteria include:

- The weighted-average interest rate of the total outstanding principal balance after replenishment is at least 2.85%;
- The weighted-average remaining term of the total outstanding principal balance after replenishment does not exceed 60 months;
- The portion of private customers is at least 90% of the total outstanding principal balance after replenishment;
- The portion of EvoClassic receivables is at least 35% of the total outstanding principal balance after replenishment;
- The portion of receivables financing new vehicles is at least 30% of the additional principal balance purchased on that payment date; and
- The weighted-average LTV ratio relating to the total outstanding principal balance after replenishment does not exceed 100%.

Interest deferral trigger

The class B to E notes can defer interest if a principal deficiency event (PDE) has occurred. On each payment date the PDE balance for each class is determined as the difference between:

- The note principal of the class of notes including those ranking senior, minus
- Amounts on the replenishment account, minus
- Total outstanding principal balance of non-defaulted receivables.

Effectively, the PDE determines the undercollateralization of each class of notes, based on the performing principal balance.

Table 7

Principal Deficiency Event	
Class of notes	**Minimum threshold (mil. €)**
B	41.4
C	24.1
D	9.5
E	6.3

Priority of payments

The class A through E-Dfrd notes pay interest in arrears on a designated date each month, at a fixed rate. The transaction will have a combined priority of payments.

Table 8

Priority Of Payments (Simplified)	
1	Senior expenses
2	Servicer fee
3	Interest on the class A notes
4	Interest on the class B notes if no class B PDE occurred
5	Interest on the class C notes if no class C PDE occurred
6	Interest on the class D notes if no class D PDE occurred
7	Interest on the class E notes if no class E PDE occurred
8	Purchase additional receivables (during revolving period only)
9	Payments to the replenishment shortfall account (during revolving period only)
10	Class A principal redemption amount
11	Interest on the class B notes if class B PDE occurred
12	Class B principal redemption amount
13	Interest on the class C notes if class C PDE occurred
14	Class C principal redemption amount
15	Interest on the class D notes if class D PDE occurred
14	Class D principal redemption amount
15	Interest on the class E notes if class E PDE occurred
16	Class E principal redemption amount
17	Replenish commingling reserve to its required amount
18	Replenish set-off reserve to its required amount
19	Remaining cash flows for the seller

Through the payment waterfall, the transaction first redeems the most senior notes' principal up to an amount equaling the difference between the outstanding class A and E notes' balance, and the assets' outstanding balance (excluding defaults). This means that the transaction uses excess spread to cure defaults, as defaulted receivables reduce the performing asset balance.

Optional redemption

Under the transaction documents, RevoCar 2020 can redeem the notes at their outstanding principal amount, together with interest accrued before the date fixed for redemption, on any interest payment date (IPD):

- At the originator's option, when the aggregate outstanding principal amount has been reduced to 10% of the initial aggregate outstanding principal amount (clean-up call);
- Following tax changes that affect note payments; or
- If a regulatory change event occurs.

The repurchase price on the early redemption date is based on the current value of outstanding receivables, including current value of delinquent and defaulted receivables, and accrued interest. The repurchase price is not floored to the outstanding principal and accrued interest on the notes. Any of the three calls can occur if the then current ratings on the notes are not negatively affected by the optional redemption.

Liquidity reserve

Bank11 will deposit 0.25% of the class A to E-Dfrd notes' nominal amount as a liquidity reserve at closing without a floor. Amounts deposited in the liquidity reserve account are available to mitigate any liquidity shortfalls in the payment of senior costs and expenses and for interest on the class A notes due to a servicer termination event. Any excess of the reserve over the required amount flows out of the waterfall. The reserve will not be replenished in the waterfall and is not available to repay notes' principal at the end of the transaction's life. Hence, we do not consider this as available credit enhancement.

Bank account provider

The bank account provider, The Bank of New York Mellon, Frankfurt Branch, will hold the operating account, the replenishment account, and the reserve accounts.

The minimum documented required long-term issuer credit rating on the bank account provider is 'A', supporting a maximum rating of 'AAA (sf)' on the notes.

Mitigation Of Seller Risks

Commingling risk

Commingling risk may arise if the servicer becomes insolvent. We assume that: (i) the amounts in the collection account at servicer insolvency, plus (ii) the amounts that come into the collection account before the issuer has notified borrowers to redirect their payments would become part of the insolvency estate of the servicer and would therefore be lost.

Collections from the purchased receivables are deposited in the servicer collection account. The servicer will transfer the collections within the same business day from receipt into the SPE's transaction account opened with The Bank of New York Mellon, Frankfurt Branch, in the issuer's name. All borrowers pay via direct debit, and 62% of collections are received on the first day and 38% on the 15th day of each month.

Under the documents, the servicer and the substitute servicer facilitator have committed to put in place a procedure to notify the borrowers to pay directly to the issuer's account upon servicer insolvency and the servicer's collection authority under the direct debit is revoked.

In our analysis, we assume that 60% of monthly collections will be lost due to amounts that come into the collection account after servicer insolvency. We do not size for amounts in the collection account at servicer insolvency because we believe the daily sweeping sufficiently mitigates this risk.

In order to mitigate this risk at closing, Bank11 funded a commingling reserve, equal to 60% of the scheduled interest and principal collections for the next succeeding month. After closing, the commingling reserve is reduced dynamically for any build-up of relative credit enhancement for the class A notes above 12.0%. In our view, this mechanism introduces unique risks to the transaction, especially in delayed recession timing scenarios (see "German Auto ABS: Our View On A New Commingling Reserve Mechanism," published Sept. 26, 2018). Based on a 0% constant prepayment rate (CPR) and 0% default cash flow run, the transaction reaches an inflection point around 12 months after closing at which point the commingling reserve is no longer funded by cash.

We have considered the amortizing feature in our cash flow analysis (see cash flow section).

Setoff risk

We have analyzed potential setoff risk in contracts with insurance components, and we have found the risk to be adequately mitigated.

The originator and seller is a deposit-taking institution. A deposit setoff reserve will be funded with the amount of the lesser of the deposits the borrowers hold with the seller and the borrower's outstanding loan balance, and adjusts the setoff reserve amount monthly. In our opinion, the potential deposit-related setoff risk is minimal, based on the deposit setoff reserve, and the support from the German deposit protection insurance. Therefore, we have not sized any additional losses.

Cash Flow Analysis

In our cash flow modeling, we did not consider the revolving period, and we analyzed the transaction's cash flows only during the amortization stage.

Our ratings on the class A notes address the timely payment of interest and ultimate payment of principal, while our ratings on the class B-Dfrd trhough D-Dfrd notes address the ultimate payment of interest and principal no later than the legal final maturity date.

Table 9

Cash Flow Assumptions	
Recession start	Closing
Length of recession	Weighted-average life (31 months)
Recovery lag	24 months
Delinquency	Liquidity stress equal to two-thirds of credit losses recovered six months later
Payment holidays	Liquidity stress equal to one-quarter of scheduled collections for first six months, collected after the portfolio's weighted-average life.
WAC (%)*	2.85
Servicing fee (%)	1.00
Fixed fees (€)	100,000
Low CPR (%)	0.50

Table 9

Cash Flow Assumptions (cont.)	
High CPR (%)	24.00
Interest up	Up from current level 0% to 12% in 2% monthly increase
Interest flat	At current level
Commingling loss	60% of monthly collections. Mitigated through a dedicated reserve at closing. The reserve amortizes in line with build-up of class A credit enhancement.
Setoff loss (€)	None

*The starting WAC is the minimum rate as per the eligibility criteria during the revolving period. WAC--Weighted-average coupon before spread compression. CPR--Constant prepayment rate. IG--Investment grade.

We applied a default curve distributed over a 31-month period (equivalent to the pool's weighted-average life). We stressed the prepayment rates and ran interest rate scenarios at the current levels and up to 12%.

We considered the exposure to negative interest rates for the amounts held in the issuer accounts, mainly collections and the reserves. We have also tested the model excluding the liquidity stress generated by the payment holidays.

The model incorporates the payment structure, including the notes' sequential amortization feature and the class B to E notes' interest deferral feature.

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, 'A' rating for the class B-Dfrd notes, 'BBB' rating for the class C-Dfrd notes, and 'BB-' rating for the class D-Dfrd notes.

To account for the commingling reserve's amortizing feature, we have also tested the structure's sensitivity to delayed recession timing and commingling loss timing. For this, we have run various cash flow runs with a recession starting around the inflection point (12 months after closing) to determine if the transaction continues to have enough enhancement and structural protections to maintain credit stability of the rated notes (see "Global Framework For Cash Flow Analysis Of Structured Finance Securities," published Oct. 9, 2014). In our most stressful scenario, the cash flow results show that the class A to D notes can withstand credit and cash flow stresses, which are in line with our credit stability criteria at the respective rating level over a one-year horizon (see "Credit Stability Criteria," published May 3, 2010). In our view, the likelihood of these multiple events to occur exactly as outlined in our scenarios in combination with the observed magnitude of the impact on credit coverage is sufficiently remote.

We have therefore assigned 'AAA (sf)', 'A (sf)', 'BBB (sf)', and 'BB- (sf)' ratings to the class A, B-Dfrd, C-Dfrd, D-Dfrd notes, respectively.

Sovereign Risk

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

Appendix

Transaction Participants	
Seller and servicer	Bank11 für Privatkunden und Handel GmbH
Arranger and lead manager	UniCredit Bank AG
Trustee	Wilmington Trust SP Services (Dublin) Ltd.
Corporate service provider and substitute servicer facilitator	Wilmington Trust SP Services (Frankfurt) GmbH
Paying agent, cash administrator, and listing agent	The Bank of New York Mellon, Frankfurt Branch
Bank account provider	The Bank of New York Mellon, Frankfurt Branch
Data protection trustee	Wilmington Trust SP Services (Dublin) Ltd.

Related Criteria

- Criteria | Structured Finance | General: Counterparty Risk Framework: Methodology And Assumptions, March 8, 2019
- Criteria | Structured Finance | General: Incorporating Sovereign Risk In Rating Structured Finance Securities: Methodology And Assumptions, Jan. 30, 2019
- Legal Criteria: Structured Finance: Asset Isolation And Special-Purpose Entity Methodology, March 29, 2017
- Criteria | Structured Finance | General: Structured Finance Temporary Interest Shortfall Methodology, Dec. 15, 2015
- Criteria | Structured Finance | ABS: Methodology And Assumptions For European Auto ABS, Oct. 15, 2015
- Criteria | Structured Finance | General: Methodology: Criteria For Global Structured Finance Transactions Subject To A Change In Payment Priorities Or Sale Of Collateral Upon A Nonmonetary EOD, March 2, 2015
- Criteria | Structured Finance | General: Global Framework For Assessing Operational Risk In Structured Finance Transactions, Oct. 9, 2014
- Criteria - Structured Finance - General: Global Framework For Cash Flow Analysis Of Structured Finance Securities, Oct. 9, 2014
- Criteria | Structured Finance | ABS: Global Methodology And Assumptions For Assessing The Credit Quality Of Securitized Consumer Receivables, Oct. 9, 2014
- General Criteria: Methodology Applied To Bank Branch-Supported Transactions, Oct. 14, 2013
- Criteria | Structured Finance | General: Criteria Methodology Applied To Fees, Expenses, And Indemnifications, July 12, 2012
- General Criteria: Methodology: Credit Stability Criteria, May 3, 2010
- Criteria | Structured Finance | General: Methodology For Servicer Risk Assessment, May 28, 2009

Related Research

- European Auto ABS Index Report Q1 2020, May 29, 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
- European Economic Snapshots: Larger Risks To Growth Loom Ahead, May 5, 2020
- Economic Research: EU Response To COVID-19 Can Chart A Path To Sustainable Growth, April 22, 2020
- Economic Research: Europe Braces For A Deeper Recession In 2020, April 20, 2020
- European ABS And RMBS: Assessing The Credit Effects Of COVID-19, March 30, 2020
- COVID-19 Will Batter Global Auto Sales And Credit Quality, March 23, 2020
- Economic Research: Low Growth And Lower Rates: The Eurozone In 2020, Sept. 26, 2019
- Credit Conditions In EMEA Show Underlying Fragility Beneath A More Stable Surface, Report Says, June 27, 2019
- At A Glance: The German Auto ABS Market, March 26, 2019
- How Much Is Enough? Information Quality Standards For The EMEA RMBS And ABS Rating Process, Jan. 8, 2019
- 2017 EMEA ABS Scenario And Sensitivity Analysis, July 6, 2017
- Global Structured Finance Scenario And Sensitivity Analysis 2016: The Effects Of The Top Five Macroeconomic Factors, Dec. 16, 2016
- European Structured Finance Scenario And Sensitivity Analysis 2016: The Effects Of The Top Five Macroeconomic Factors, Dec. 16, 2016
- Scenario Analysis: Gross Default Rates And Excess Spread Hold The Answer To Future European Auto ABS Performance, May 12, 2009