MOODY'S
INVESTORS SERVICE

CREDIT OPINION
3 December 2019

New Issue

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Closing Date
27 November 2019

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CAIXABANK PYMES 11, FONDO DE TITULIZACIÓN

New Issue Report

Capital structure

Exhibit 1
Capital structure

Series	Original rating	Amount (€ million)	% of notes	Legal final maturity	Coupon	Subordination*	Reserve fund*	Total credit enhancement**
Series A	Aa2(sf)	2,131.5	87.00%	Apr-52	0.75%	13.00%	4.70%	17.70%
Series B	Caa1(sf)	318.5	13.00%	Apr-52	0.80%	0.00%	4.70%	4.70%
Total		**2,450.0**	**100.00%**					

* As percentage of the initial pool of assets
** As percentage of the initial pool of assets. No benefit attributed to excess spread for this calculation
Source: Moody's Investors Service

Summary

The subject transaction is a cash securitisation of a €2.45 billion static pool comprising loans and drawdowns under mortgage lines of credit originated by CaixaBank, S.A. ("CaixaBank", Long Term Deposit Rating: A3 Not on Watch / Short Term Deposit Rating: P-2 Not on Watch) and mainly extended to small and medium-sized enterprises (SME) and self-employed individuals located in Spain. Our quantitative, structural and legal analysis of this transaction supports the ratings assigned to the notes.

Credit strengths

» **Portfolio characteristics:**

- *Very granular portfolio, low obligor concentration:* The effective number of obligors is over 1,000 and the top 10 obligors represents only 5.03% of the pool balance.
- *Absence of refinanced and restructured assets:* Refinanced and restructured loans/credit lines (as defined by the Bank of Spain) have been excluded from the pool (See the Appendix 3).
- Around 9% of the debtors are corporate but around 30% of that bucket is concentrated in the Real Estate Developers (RED) sector (see section Asset description)

» **Transaction structure:**

- *Simple structure:* The transaction structure includes a single waterfall and a relatively simple reserve fund mechanism, among other features (see section Detailed description of the structure).

» **Other features:**

- *Good performance of the Originator's previous transactions:* Performance of CaixaBank originated transactions has been better than the average observed in the Spanish market (see section Primary asset analysis).

Credit challenges

» **Portfolio characteristics:**

- *Exposure to the real estate sector:* 22.5% of the pool balance is exposed to the Construction and building sector (according to our industry classification), which includes 11.52% corresponding to loans granted to real estate developers. (see section Primary asset analysis).
- *Region Concentrations:* 27.1% of the pool is concentrated in Catalonia (see section Primary asset analysis).

» **Transaction structure:**

- *High degree of linkage to the Originator:* Besides acting as servicer, the Originator holds the accounts receiving the pool collections and the account holding the reserve fund (commingling risk). This feature has been taken into account in our analysis (see section Additional structural analysis).
- *Interest rate risk:* 55.7% of the pool balance consist of floating rate loans and 44.3% consist of fixed rate loans, whereas the notes are fixed liabilities. Therefore, the transaction is exposed to interest rate risk as the transaction is not protected by an interest rate swap. This feature has been taken into account in our analysis (see section Additional structural analysis).

Key characteristics

Exhibit 2

Asset summary (provisional pool as of October 2019) and related key party characteristics

Asset characteristics	
Receivables	Loans and drawdowns under lines of credit extended to mainly small and medium-sized enterprises (SMEs) and self-employed individuals located in Spain
Total amount (EUR)	2,533 million
Number of borrowers	36,146
Number of borrower groups	N/A
Number of assets	36,146
Effective number	Over 1,000
WA remaining term (in years)	6.7
WA seasoning (in years)	1.2
WAL of the portfolio (in years)	3.80 (with 0% CPR)
Interest basis	44.3% fixed rate assets, 55.7% floating rate assets
WA interest rate (total pool)	1.96%
% collateralised by first lien mortgage	17.9% (23.1% of the portfolio is secured by real estate mortgages)
WALTV	49.3%
Delinquency status	0.70% of pool balance relates to contracts that are delinquent for less than 60 days (the definitive portfolio may only contain 1% of contracts that are delinquent between 30 and 90 days, according to eligibility criteria)
Historical portfolio performance data	
Default rate:	Based on extrapolated historical vintage analysis, 3.8% over a time horizon of around 3.7 years (90+ definition of defaults)
Recovery rate:	Based on extrapolated historical vintage analysis, 59.4% (90+ definition of defaults)
Transaction parties	
Seller/Originator:	Caixabank (Long Term Deposit Rating: A3 Not on Watch / Short Term Deposit Rating: P-2 Not on Watch; Long Term Counterparty Risk Assessment: A3(cr) Not on Watch /Short Term Counterparty Risk Assessment: P-2(cr) Not on Watch; Outlook: Stable)
Servicer	CaixaBank
Back-up servicer	N/A
Back-up servicer facilitator	CaixaBank Titulización, S.G.F.T.,S.A.U.(Not rated) plays this role (as well as other roles) as part of its functions as management company

Source: Moody's Investors Service

Exhibit 3

Securitization structural features and related key party characteristics

Structural characteristics	
Excess spread at closing:	The transaction has no hedging mechanism. At closing the difference between WA spread on the pool and WA fixed interest on the notes is 1.2%
Credit enhancement/Reserves:	Subordination of the notes and excess spread Reserve fund: 4.7% (as percentage of the initial pool of assets)
Form of liquidity:	Reserve fund, principal to pay interest and excess spread
Number of interest payments covered by liquidity:	As per the amount funded at closing, the reserve fund would cover more than three years of quarterly payments of interest and senior fees, even considering 0.5% of stressed senior fees
Interest payments:	Quarterly in arrears on each payment date
Principal payments:	Pass-through on each payment date
Payment dates:	22 April 2020, thereafter 22 of July, October and January
Hedging arrangements:	None
Transaction parties	
Issuer:	Caixabank Pymes 11, Fondo De Titulización
Computational agent:	Caixabank Titulización S.G.F.T., S.A.U.
Back-up calculation/Computational agent:	N/A
Swap counterparty:	N/A
Issuer account bank:	CaixaBank
Collection account bank:	CaixaBank
Paying agent:	CaixaBank
Corporate service provider:	N/A
Representative of the noteholders:	Caixabank Titulización S.G.F.T., S.A.U.
Arranger/Lead manager:	Caixabank Titulización S.G.F.T., S.A.U./ Caixabank
Cash manager:	Caixabank Titulización S.G.F.T., S.A.U.
Back-up cash manager:	N/A

Source: Moody's Investors Service

Asset description

The securitised portfolio consists of loan contracts and drawn amounts under lines of credit entered into by the Originator mainly with SMEs and self-employed individuals in Spain, most of them granted to fund the acquisition of fixed assets (24.1% of the pool balance) and machinery and vehicles (16.9% of the pool balance) and working capital (9.33%).

The balance of the audited provisional portfolio is approximately €2.53 billion, 23.1% of which is secured by real estate mortgages (17.9% is secured by first lien mortgages), with a weighted average loan to value of 49.3%. The vast majority of the portfolio are assets with a monthly payment frequency (79.8% of the pool balance). In terms of borrower type, 75.3% of the pool balance consists of loans and drawn amounts under lines of credit granted to SMEs and 14.7% consists of assets granted to self-employed individuals. The assets were originated mainly between 2014 and 2019 and have a weighted average seasoning of 1.2 years and a weighted average remaining term of 6.7 years. The longest asset matures in 2048. Geographically, the pool is concentrated in Catalonia (27% of the pool balance). Most assets are subject to French or linear amortisation (95.4% of the pool balance) and 3.55% are subject to bullet amortisation.

Pool characteristics

The below exhibits show some basic characteristics of the pool of assets.

Exhibit 4

Pool details

Pool details	
Type of assets	Secured and unsecured loan contracts and secured drawdowns under lines of credit
Total amount (EUR)	2,533 million
Average asset balance (EUR)	67,082
Number of assets	36,146
Number of borrowers	36,146
Number of borrower groups	N/A
Effective number	Over 1,000
WA seasoning (in years)	1.2
WA remaining term (in years)	6.7
WAL of the portfolio (in years)	3.80 (with 0% CPR)
Minimum maturity	January 2020
Maximum maturity	October 2048
Interest basis	44.3% fixed rate assets, 55.7% floating rate assets
WA interest rate (total pool)	1.96%
WA spread (floating rate subpool)	1.64%
Contract amortisation type	Most of the contracts have french or linear (95.82%) amortization
% Bullet loans	3.55%
% Large corporates	Around 10%
% Real estate developers*	11.52%
WA Moody's equivalent rating**	Ba2
% collateralised by first lien mortgage	17.9% (23.1% of the portfolio is secured by real estate mortgages)
WALTV	49.3%
Delinquency status	0.70% of pool balance relates to contracts that are delinquent for less than 60 days (the definitive portfolio may only contain 1% of contracts that are delinquent between 30 and 90 days, according to eligibility criteria)

* Real estate developers include NACE codes 41.10, 68.10 and 68.20

** Moody's equivalent ratings are based on internal PDs provided by the Originator

Source: The Originator and Moody's Investors Service

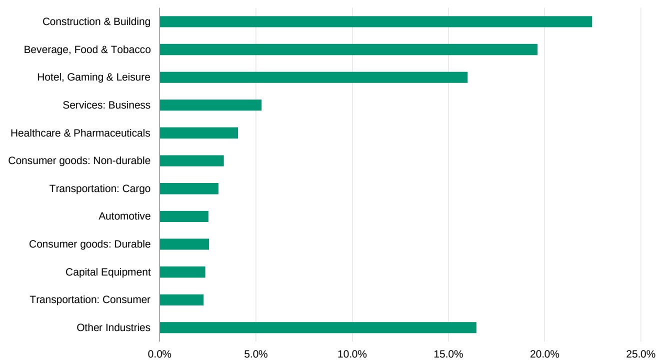
The following exhibits show portfolio concentrations according to obligor size, industry and region.

Exhibit 5
Pool concentration levels

Pool details	
Top debtor concentration	0.63%
Top 10 debtors	5.03%
Top 20 debtors	8.58%
Effective number	Over 1,000
Name 1st largest industry	Construction & Building
Size % 1st largest industry	22.46%
Name 1st largest region	Catalonia
Size % 1st largest region	27.1%

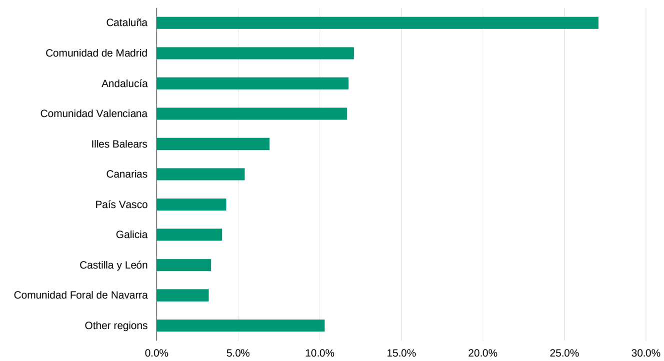
Source: The Originator and Moody's Investors Service

Exhibit 6
Industry concentrations



Source: The Originator and Moody's Investors Service

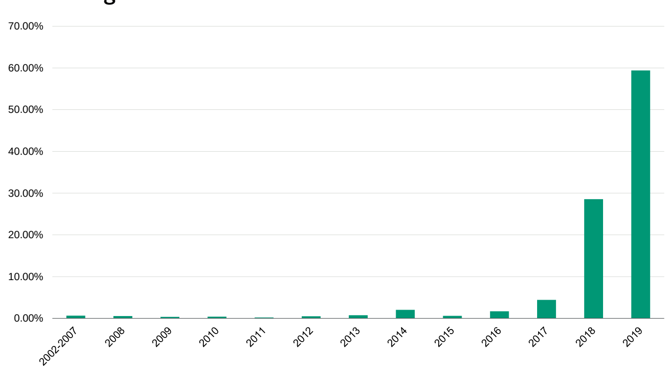
Exhibit 7
Region concentrations



Source: The Originator and Moody's Investors Service

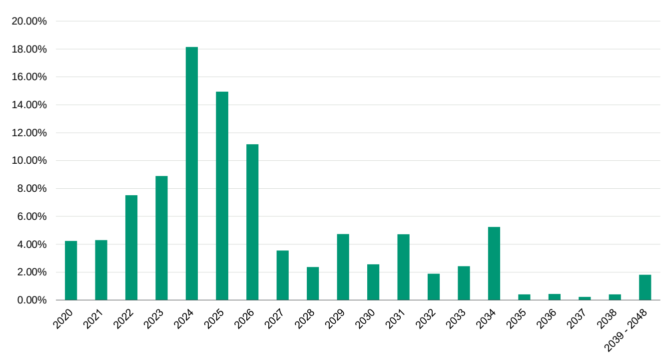
The charts below show the portfolio concentrations by year of origination and maturity date.

Exhibit 8
Year of origination



Source: The Originator and Moody's Investors Service

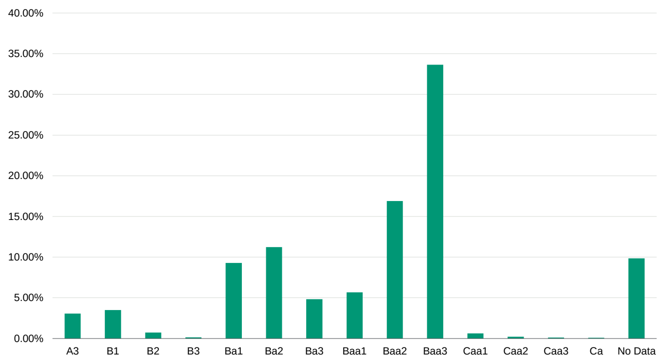
Exhibit 9
Year of maturity



Source: The Originator and Moody's Investors Service

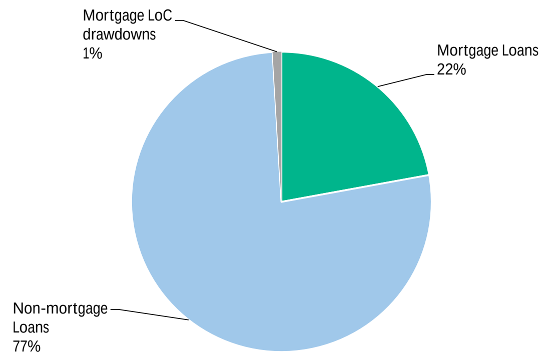
The charts below show portfolio concentration by rating and collateral type.

Exhibit 10
Borrower credit quality by Moody's equivalent rating*



* Moody's equivalent ratings are based on internal PDs provided by the Originator
Source: The Originator and Moody's Investors Service

Exhibit 11
Type of contract and collateral



Source: The Originator and Moody's Investors Service

Lines of credit

Less than 1% of the portfolio comprises drawdown amounts under a product structured as a line of credit, all of them secured by mortgages. This product gives the borrower the opportunity to obtain additional financing easily as well as payback flexibility.

Borrowers are allowed to withdraw for an amount equal to the already amortised amount, or up to an established credit limit. The credit lines are typically used for the purpose of acquiring assets and working capital.

The main characteristics of the line of credits are the following:

» The subsequent redraws rank pari-passu with the first draw in case of foreclosure

» CaixaBank may impose clauses that allow the bank to deny subsequent redraws when they are not feasible (based on the borrower's payment history, etc.)

» The lines of credit might have the option of enjoying principal grace periods and holiday payments

Originator and servicer

CaixaBank is the transaction's originator and servicer. The table below provides details about CaixaBank (for more information on the Originator and Servicer please see Appendix 2).

Exhibit 12
Originator and servicer background: CaixaBank

Originator and servicer background	
Rating:	CaixaBank (Long Term Deposit Rating: A3 Not on Watch /Short Term Deposit Rating: P-2 Not on Watch; Long Term Counterparty Risk Assessment: A3(cr) Not on Watch /Short Term Counterparty Risk Assessment: P-2(cr) Not on Watch; Outlook: Stable)
Financial institution group outlook for sector:	Stable
Ownership structure:	Listed company
Asset size:	EUR 406 billion (as of June 2019)
% of total book securitised:	N/A
Transaction as % of total book:	N/A
% of transaction retained:	100%

Source: The Originator and Moody's Investors Service

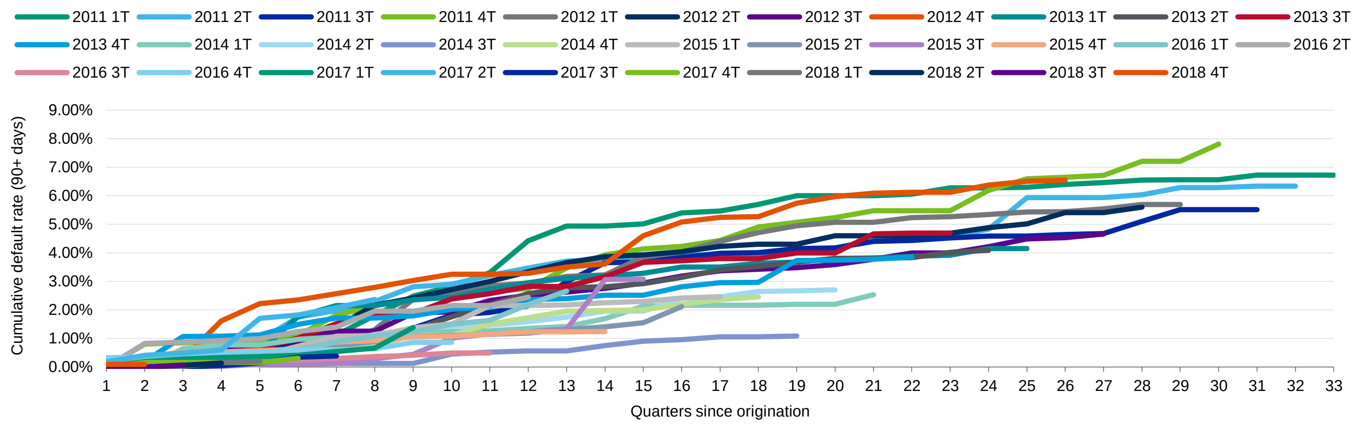
The exhibits below show the historical performance data of CaixaBank originations.

» Moody's received static default (more than 90 days in arrears) and recovery data on a pool similar to the pool securitised in this transaction, broken down by subpools depending on the type of collateral of the loans (mortgage subpool and non-mortgage subpool).

» The information provided covers the last full economic cycle.

Exhibit 13

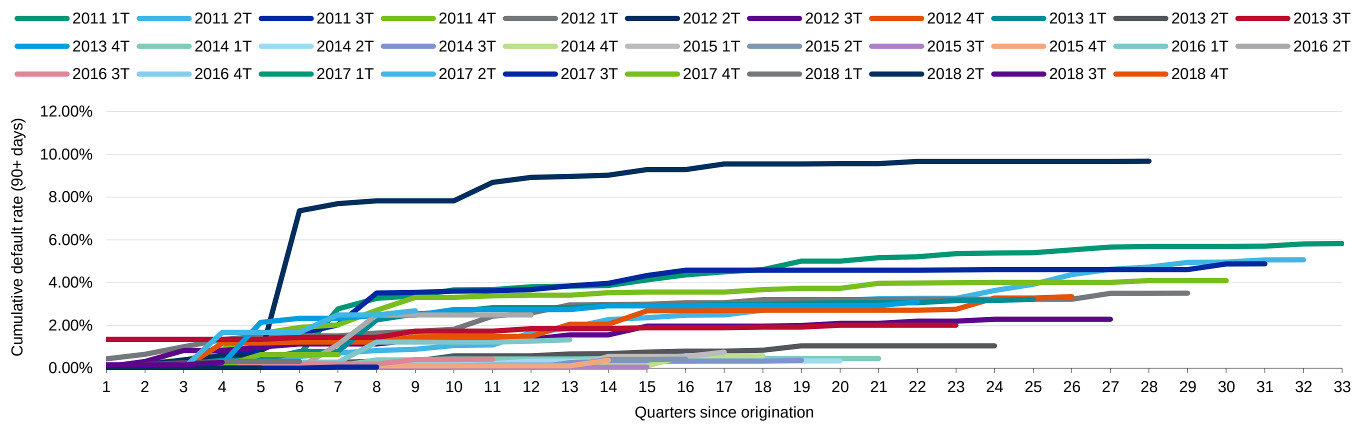
Cumulative default rate (90+) - Secured Loans subpool



Source: The Originator and Moody's Investors Service

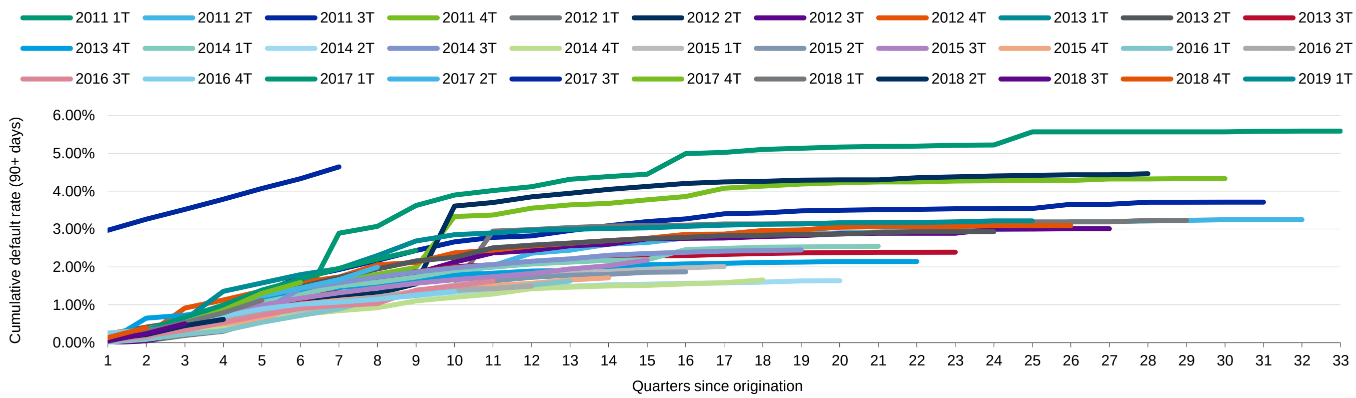
Exhibit 14

Cumulative default rate (90+) - Secured LoCs subpool



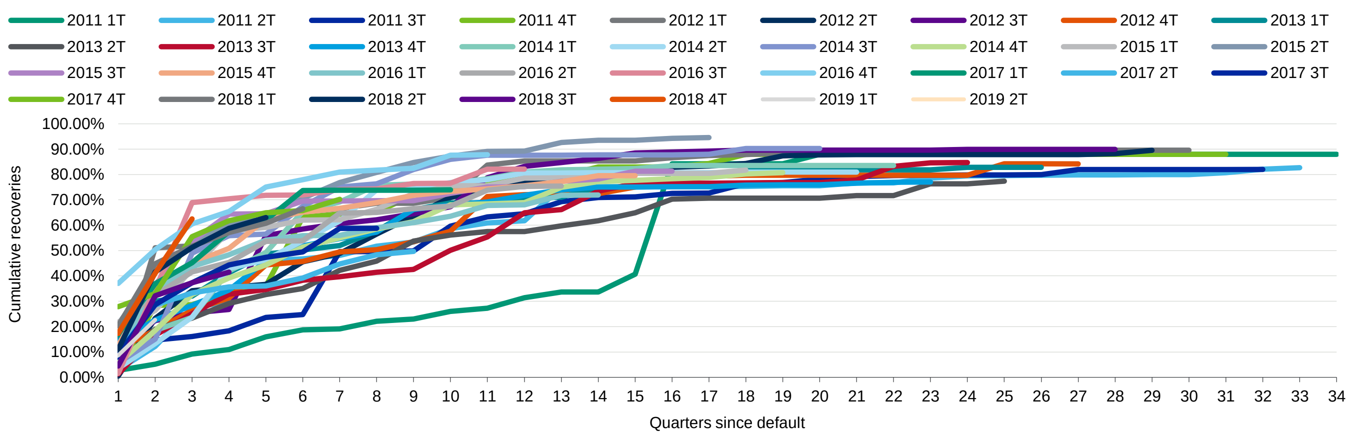
Source: The Originator and Moody's Investors Service

Exhibit 15
Cumulative default rate (90+) - Unsecured loans and LoCs



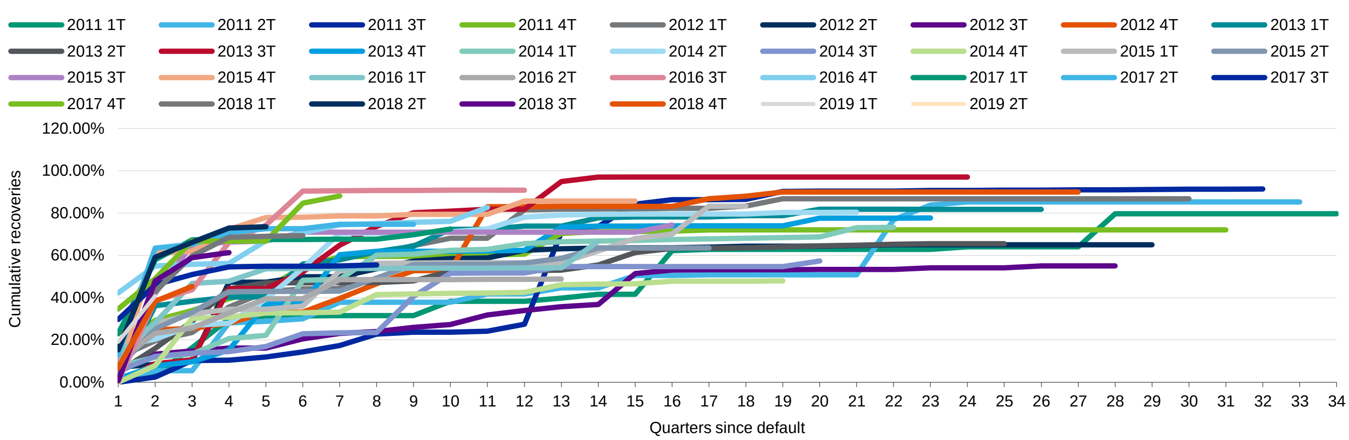
Source: The Originator and Moody's Investors Service

Exhibit 16
Cumulative recoveries - Secured loans subpool



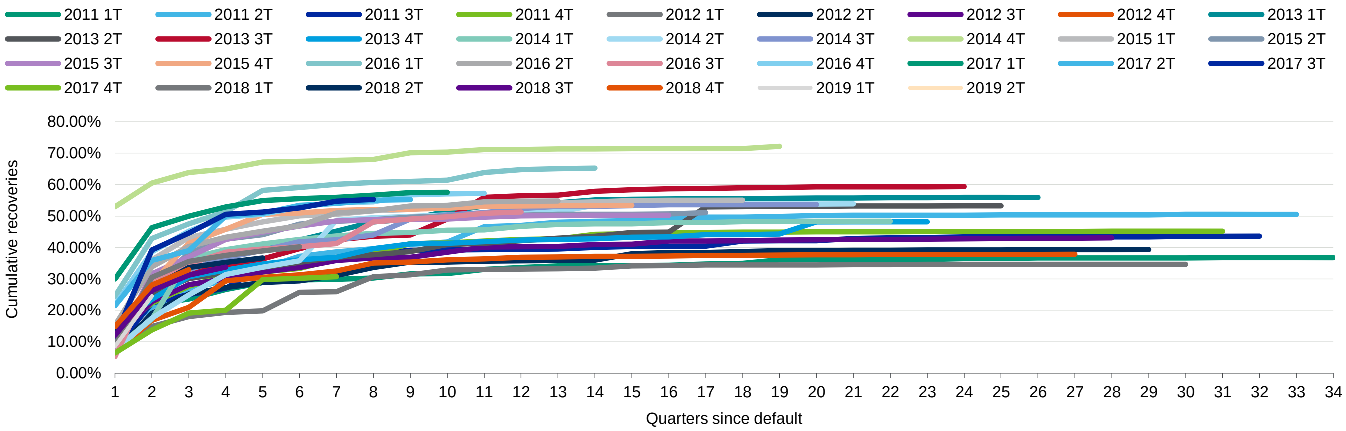
Source: The Originator and Moody's Investors Service

Exhibit 17
Cumulative recoveries - Secured LoCs subpool



Source: The Originator and Moody's Investors Service

Exhibit 18
Cumulative recoveries - Unsecured Loans and LoCs subpool



Source: The Originator and Moody's Investors Service

The table below shows our assessment of CaixaBank as an originator and servicer as a result of the analysis of the information provided by the bank, data on performance of past transactions originated by CaixaBank and the operations review carried out in September 2019 (for more information on the Originator and Servicer please see Appendix 2).

Exhibit 19
Originator and servicer quality

Originator and servicer quality	
Date of last operations review	September 2019
Originator quality	Good
Servicer quality	In line with the market

Source: Moody's Investors Service

Eligibility criteria
While the transaction does not establish an eligibility criteria per se, the Originator's Representations and Warranties regarding the assets define which asset the SPV can purchase. See the Appendix 3 for a list of the transaction's key eligibility criteria.

Absence of revolving period
The securitization does not include a revolving period during which the SPV could purchase additional loans. This limits the portfolio performance volatility caused by additional loan purchases.

Assets analysis

Primary asset analysis

We based our analysis of the transaction assets on factors including historical performance data, originator and servicer quality and pool characteristics.

Probability of default
We use the originator's historical performance data to help determine the mean probability of default of the securitised pool.

Derivation of default rate assumption: We analysed the available historical performance data the Originator provided and the performance of previous transactions originated by CaixaBank. We extrapolated the default vintage data to define the cumulative default curve for each of the origination vintages.

We complemented the historical data analysis with a top-down approach, as we typically apply when rating SME loan transactions, and as described in more detail in our methodology report, Moody's Global Approach to Rating SME Balance Sheet Securitizations, July 2019. Starting from a base rating proxy of Ba2 for a SME based in Spain (Baa1/(P)P-2), we evaluate the portfolio based on several features, including:

1. The size of the companies. We assume one notch penalty for micro-SMEs and self-employed individuals (approximately 44% of the pool balance) and one notch benefit for Corporates (approximately 9% of the pool balance).
2. The borrowers' sector of activity. For example, we applied a one-notch penalty to assets whose underlying borrower was active in the construction sector (11% of the pool balance excluding real estate developers) and a two-notch penalty for borrowers classified as real estate developers (11.5% of the pool balance).
3. The holiday payments. We applied a penalty on the default probability of the assets for which it is allowed future principal or interest and principal payment holidays, considering the number of payment holiday periods allowed.

We adjusted our assumption to take into account the current economic environment and its potential impact on the portfolio's future performance (zero notch penalty), as well as industry outlooks or past observed cyclicality of sector-specific delinquency and default rates. We also evaluated and benchmarked the originator's underwriting capabilities against other Spanish originators (¼-notch benefit).

As a result, we expect an average portfolio credit quality equivalent to a probability of default corresponding to a Ba3 proxy rating for an average life of approximately 3.8 years for the portfolio. This translates into a gross cumulative default rate of 9.5%.

Severity

We analyzed the historical recovery data as provided by the originator.

Derivation of recovery rate assumption: assumptions for recoveries were made on the basis of (i) historical recovery information provided specifically for this deal and data available from previous deals of the Originator; (ii) statistical information on the Spanish SME market; and (iii) collateral-specific loan-by-loan portfolio information. With regard to the credit lines, given that the subsequent redraws rank pari-passu with the securitised drawdowns in case of execution, we have stressed the recovery rate by assuming that the current undrawn amounts under the credit line contracts are fully redrawn by the borrowers (until the credit limit is reached).

Based on this analysis we assumed a stochastic mean recovery rate of 42% and a standard deviation of 20%. We assumed the base case recovery timing as follows: 50% in second year after default and 50% in third year.

Default Distribution

Owing to the high granularity of the pool, we used a normal inverse default distribution. Two basic parameters needed to be assessed as main inputs to generate the default distribution:

» The mean default probability for the portfolio (9.5% over an average life of approximately 3.8 years, as explained above), and

» The standard deviation of the normal inverse distribution.

Standard deviation: To define the standard deviation for the normal inverse default distribution, we ran a Monte Carlo simulation (using the Moody's CDOROM™) based on the securitised portfolio's actual loan-by-loan information to capture the pool concentrations in terms of single obligors and industry segments. We used, inter alia, the loan-by-loan default probabilities (i.e. outcome of the analysis carried out in section Primary asset analysis), the borrower industry sectors, the weighted average life and a probabilistic correlation framework. Finally, we performed a benchmark analysis against other recent Spanish SME deals and took into account the Aa1 country's local currency country risk ceiling (LCC) to calibrate the curve.

As a result, we assume a normal inverse default distribution with a coefficient of variation (ratio between standard deviation and mean default rate) of 47.6%, resulting in a Porfolio Credit Enhancement (PCE) of 20%, that takes into account sovereign risk as well.

Timing of default: We assumed a flat default timing curve as base case, spread over the portfolio's WAL (rounded to 3.75 years) starting after the default definition.

Prepayments

Based on the performance of previous deals originated by CaixaBank and the benchmark analysis against recent similar transactions we assumed a CPR at a level of 5% per annum.

Data quality

The quantity and quality of the originator's historical default data we received is in line with other transactions which have achieved investment grade ratings in this sector.

Comparables

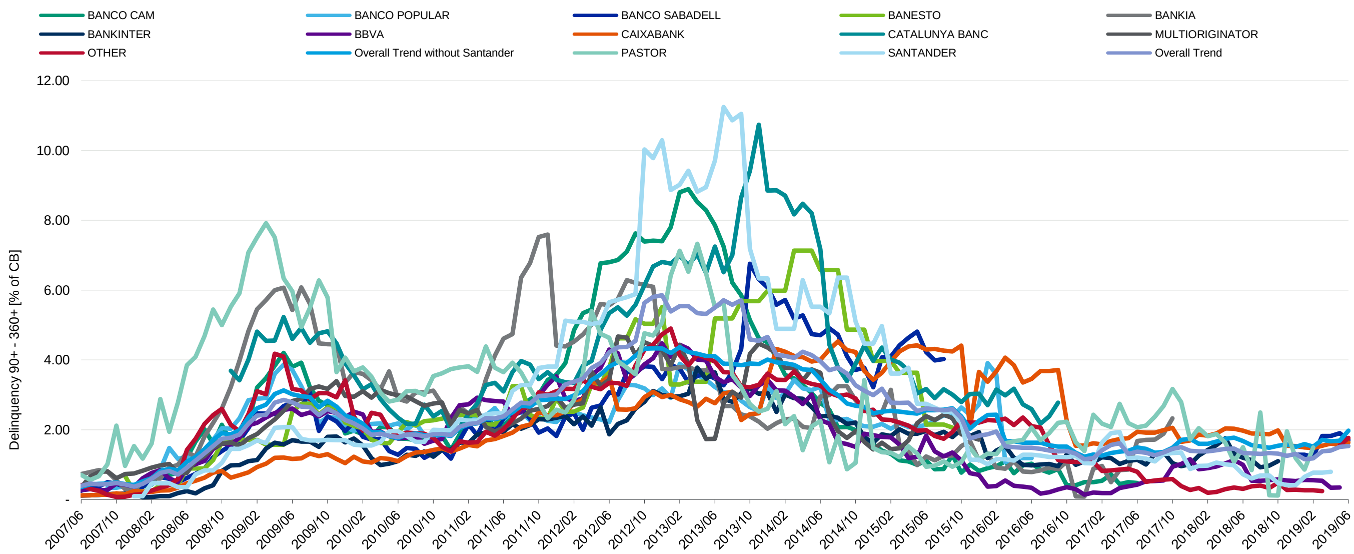
Prior transactions of the sponsor

The performance of the Originator's previous transaction has been better than that of the remaining Spanish originators in the SME segment (see details in exhibits below).

Exhibit 20

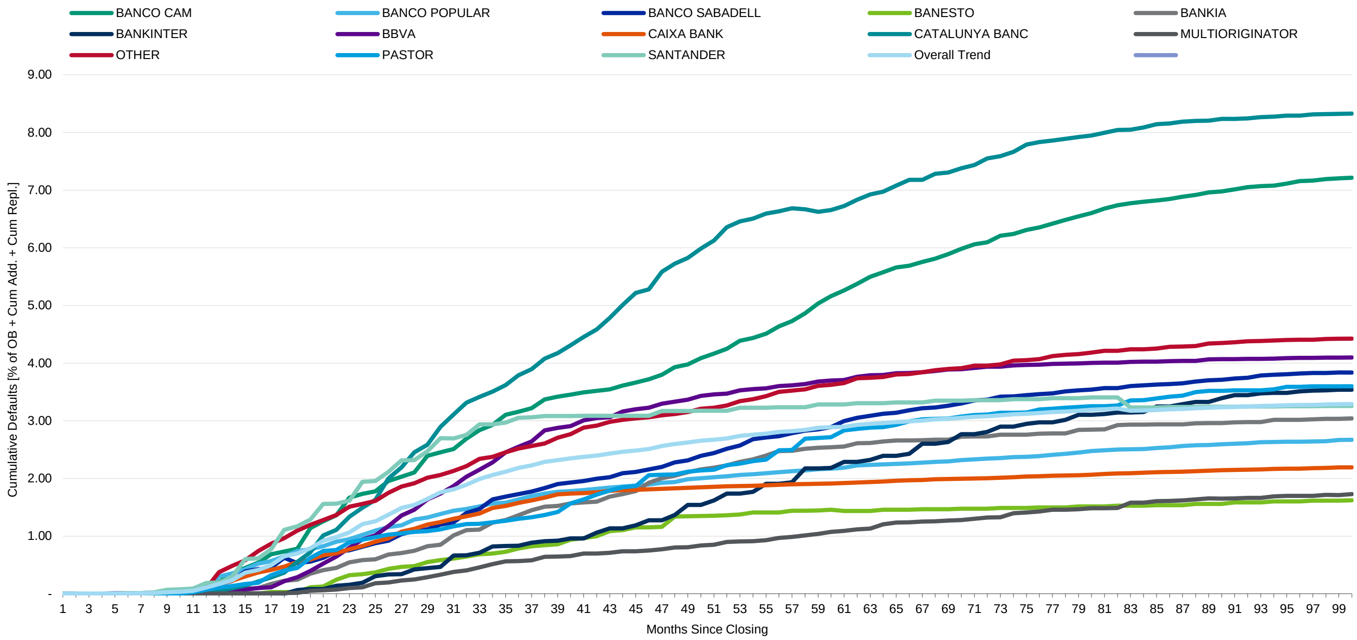
90-360 days delinquency

Spanish SME 90-360 days delinquency - trend by originator



Source: Moody's Investors Service, Moody's Performance Data Service, periodic investor/servicer reports

Exhibit 21
Cumulative defaults
Spanish SME cumulative defaults - seasoning by originator



Source: Moody's Investors Service, Moody's Performance Data Service, periodic investor/servicer reports

Previous transactions from CaixaBank

Exhibit 22
Benchmark table

Deal name	CaixaBank Pymes 11, Fondo De Titulizacion	CaixaBank Pymes 10, Fondo De Titulizacion	CaixaBank Pymes 9, Fondo De Titulizacion	Foncaixa Pymes 7, FTA
Country	Spain	Spain	Spain	Spain
Closing date	Nov-19	Nov-18	Nov-17	Nov-15
Currency of rated issuance	Euro	Euro	Euro	Euro
Rated notes volume (excluding NR and equity) - EUR	2,450,000,000	3,466,025,645	1,850,000,000	2,530,000,000
Originator	CaixaBank	CaixaBank	CaixaBank	CaixaBank
Long-term rating (*)	A3/ A3(cr)	Baa1/ A3(cr)	Baa2 / Baa1(cr)	Baa2 (Stable outlook)
Short-term rating (*)	P-2	P-2	P-2	P-2
Servicer (*)	CaixaBank	CaixaBank	CaixaBank	CaixaBank
Long-term rating (*)	A3/ A3(cr)	Baa1/ A3(cr)	Baa2 / Baa1(cr)	Baa2 (Stable outlook)
Short-term rating (*)	P-2	P-2	P-2	P-2
Contract information (as % total pool)				
(Fully) amortising contracts %	96.45%	96.71%	96.80%	95.80%
Bullet / balloon contracts %	3.55%	3.29%	3.2% bullet contracts	4.20%
Method of payment - Direct debit (minimum payment)	100%	100%	100%	100%
Floating rate contracts %	55.7%	65.6%	58.70%	74.0%
Fixed rate contracts %	44.3%	34.4%	41.30%	26.0%
WA initial yield (Total pool)	1.96%	2.3%	2.4%	3.46%
WAL of Total pool (in years)	3.80 (with 0% CPR)	3.82 (with 0% CPR)	3.7 (with 0% CPR)	2.6
WA seasoning (in years)	1.2	2.6	0.9	1.3
WA remaining term (in years)	6.7	6.7	7.6	4.6
Portfolio share in arrears > 30 days %	0%	0%	0%	0.2%
No. of contracts	36,146	65,807	36,785	60,281
Obligor information (as % Total pool)				
No. of obligors	36,146	57,930	32,901	53,272 (incl. groups)
Name 1st largest industry	Construction & Building	Construction & Building	Beverage, Food & Tobacco	Beverage, Food & Tobacco
2nd largest industry	Beverage, Food & Tobacco	Beverage, Food & Tobacco	Construction & Building	Construction & Building
3rd largest industry	Hotel, Gaming & Leisure	Hotel, Gaming & Leisure	Hotel, Gaming & Leisure	Hotel, Gaming & Leisure
Size % 1st largest industry	22.46%	23.23%	25.00%	23.70%
2nd largest industry	19.63%	18.35%	17.20%	11.60%
3rd largest industry	15.99%	13.20%	10.60%	10.10%
Effective number	Over 1,000	Over 2,000	1,147	3,805
Single obligor concentration %	0.63%	0.65%	1.7%	0.40%
Top 10 obligor concentration %	5.03%	4.43%	5.50%	2.50%
Collateral information (as % Total pool)				
WA LTV	49.3%	48.30%	60.10%	40.40%
Collateralised by first lien mortgage	17.9%	16.6%	11.2%	4.50%
Geographical stratification (as % Total pool)				
Name 1st largest region	Catalonia	Catalonia	Catalonia	Catalonia
2nd largest region	Madrid	Madrid	Valencia	Valencia
Size % 1st largest region	27.09%	30.40%	26.20%	30.60%
2nd largest region	12.09%	15.80%	13.70%	11.80%

Deal name	CaixaBank Pymes 11, Fondo De Titulizacion	CaixaBank Pymes 10, Fondo De Titulizacion	CaixaBank Pymes 9, Fondo De Titulizacion	Foncaixa Pymes 7, FTA
Asset assumptions				
Gross default / Net loss definition in this deal	12 months	12 months	12 months	12 months
Type of default / loss distribution	Inverse normal	Inverse normal	Inverse normal	Inverse normal
Mean gross default rate - initial pool	9.50%	10.00%	9.40%	7.40%
Stdev.	4.52%	4.32%	4.25%	4.10%
CoV	47.60%	43.20%	45.30%	54.70%
Stochastic recoveries modelled?	Yes	Yes	Yes	Yes
Mean recovery rate	42.00%	42.00%	38.00%	35.00%
Stdev. recovery rate (if any)	20.00%	20.00%	20.00%	20.00%
Correlation severity / default	10.00%	10.00%	10.00%	10.00%
Correlation severity	10.00%	10.00%	10.00%	10.00%
Prepayment rate(s)	5.00%	5.00%	5.00%	5.00%
PCE	20.00%	20.00%	18.70%	n/a
Capital structure (as % Total pool)				
Size of Aaa-rated class				
Aa-rated class	87%(Aa2)	84% (Aa2)		
A-rated class			88% (A1)	85% (A1)
Baa-rated class				
Ba-rated class				
B-rated class or below	13%(Caa1)	16% (Caa2)	12% (Caa3)	15% (Caa1)
Equity				
Reserve fund	4.70%	4.75%	4.55%	4.00%

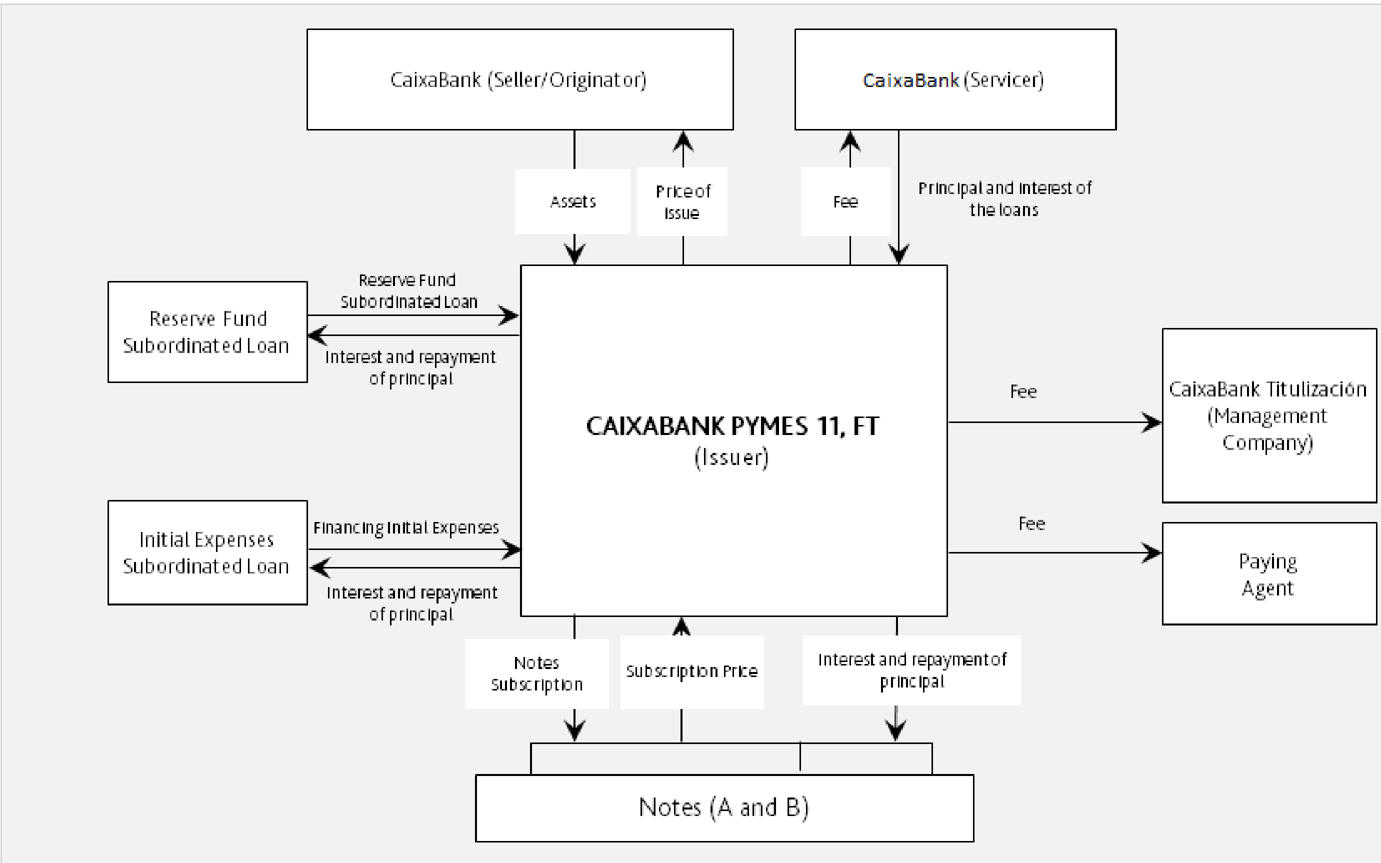
* as of the date of assigning the rating to the transaction
Source: Moody's Investors Service

Securitization structure description

The proceeds of the notes will be used to finance the acquisition of the portfolio, the original amount of which equals €2,450 million (as of closing). The interest and principal priorities of payment are combined in a single waterfall. The amortization period will start on the first interest payment date.

Structural diagram

Exhibit 23
Structural diagram



Source: Moody's Investors Service based on transaction documents

Detailed description of the structure

Credit enhancement

The main sources of credit enhancement are the subordination (13.00% in the case of Class A notes, as a percentage of the initial pool of assets), the reserve fund and the excess spread.

Reserve fund: At closing the transaction will have a reserve fund equivalent to 4.70% of the principal outstanding amount of Series A and B notes, i.e. €115.15 million. The reserve fund will be used on an ongoing basis to cover potential shortfalls on interest or principal on Series A notes, for as long as these are outstanding. Only after Series A notes have been fully redeemed, the reserve fund will be available to cover any interest or principal shortfalls on Series B notes.

Liquidity

The single waterfall means principal is also available to make interest payments. The reserve fund is a further source of liquidity; at closing it covers more than 3 years of interest payments on the notes after stressed servicing fees.

Waterfall

On each quarterly payment date, the issuer's available funds (i.e. interest and principal amounts received from the portfolio, the reserve fund, and interest earned on the issuer's account) will be applied in the simplified order of priority shown in Appendix 3.

PDL Mechanism

A principal deficiency ledger (PDL) is defined as the negative difference between the principal available funds and a target principal amount. A target principal amount is the difference between the notes' outstanding principal and the performing assets. In this transaction, a non-performing asset is defined as (i) one in arrears for a period equal or exceeding 12 months for amounts due; (ii) one classified as non-performing by the Management Company because there is reasonable doubt that it will be repaid in full; or (iii) one in which the debtor has been declared insolvent.

Triggers

Exhibit 24

Originator, servicer, cash manager and counterparty triggers

Originator, servicer, cash manager and counterparty triggers	
Key servicer termination events:	» Insolvency; » Breach of service obligation resulting in being substituted as servicer; or » At the request of the management company (acting in the best interest of the noteholders)
Appointment of back-up servicer upon:	n/a
Key cash manager termination events:	Insolvency
Notification of obligors of True Sale:	Following the termination of the appointment of the servicer
Conversion to daily sweep (if original sweep is not daily):	Not applicable (daily sweeping since closing).
Notification of redirection of payments to SPVs account:	Following the termination of the appointment of the servicer
Accumulation of set off reserve:	n/a
Accumulation of liquidity reserve :	n/a
Set up liquidity facility:	n/a
Issuer account bank/Paying agent replacement:	If CaixaBank's long- term rating falls below Ba2 it will have to find a suitably rated guarantor or substitute

Source: Moody's Investors Service based on transaction documents

Exhibit 25

Performance triggers

Performance triggers		
Trigger	Conditions	Remedies / Cure
Termination of reserve fund amortisation	The reserve fund is not funded at its required level on the previous payment date Less than one year has elapsed since closing	The target amount of the reserve fund will not be reduced on any payment date on which these occur.

Source: Moody's Investors Service based on transaction documents

Cash commingling risk and account bank risk

Commingling risk generally arises when cash belonging to the SPV is deposited in an account held in the name of a third party, specifically the servicer. The Servicer collects all of the payments under the loans in its portfolio under a direct debit scheme into its account and transfers them daily to a treasury account in the name of the SPV.

As a result, in the event of insolvency of the Servicer, and until notification is delivered to the relevant debtors to redirect their payments, payments by the underlying debtors will continue to be collected by the Servicer and may be commingled with other funds belonging to the Servicer.

Issuer account bank trigger is set at the loss of Ba2 (deposit rating), the remedy being to replace the Issuer account bank or find a guarantor.

Given the servicer is rated above Baa2 and the limited commingling exposure, we view the risk as immaterial.

Claw-back risk
As per the Spanish legal framework, in the case of the transfer of credit rights claw-back risk is limited to those activities performed during a period of two years prior to the declaration of the bankruptcy state and only in the event of fraud.

Set-off
100% of obligors have accounts with the Originator. According to the Spanish Law, set-off is very limited because only unpaid installments prior to the declaration of insolvency might be offset against the deposits held by the debtors (considered as fully due and payable prior to the insolvency).

True sale
According to the legal opinion received, the sale of credit rights has been carried out in compliance with Spanish securitisation law.

Bankruptcy remoteness
Bankruptcy remoteness: Under Spanish securitisation law, a Spanish SPV (Fondo de Titulización) is not subject to the Spanish Insolvency Act. Only the Management Company, acting in the best interest of the noteholders, can decide to liquidate the SPV.

Renegotiations
Although the servicer can renegotiate the terms of the loans, its ability to do so is limited. For example:

» The weighted average interest rate of the assets after any renegotiation should not fall below 1%.

» The maturity date on a loan may be extended (limited to 5% of the initial portfolio), provided that (i) maturities on mortgage assets may not be extended beyond January 2048 and (ii) maturities on non-mortgage assets may not be extended beyond September 2030.

Management company
CaixaBank Titulizacion, S.G.F.T., S.A.U. is the transaction's Management Company, which, according to the Spanish Law and the transaction legal documentation, is responsible for the organisation, management and legal representation of the SPV and is also responsible for the representation and defence of the interests of the noteholders.

The Management Company main responsibilities are described in Appendix 4.

Securitization structure analysis
We modeled the bond structure and cash flow waterfall to assess the amount of credit enhancement supporting the rated securities. We also analyzed the allocation of payment, bankruptcy remoteness and other structural issues.

Primary structure analysis
Expected loss
We determine expected losses for each tranche based on a number of assumptions, which are listed in the exhibit below.

Exhibit 26
Expected loss assumptions

Expected loss assumptions	
Default distribution	Inverse normal
Default rate	9.5% over a WAL (equivalent to the DP of a Ba3 rating)
Default definition	12 months
CoV (Standard deviation/Mean)	47.30%
Portfolio credit enhancement (PCE)	20.00%
Timing of default	Flat over portfolio WAL (rounded to 3.75 years)
Recovery mean	42.00%
Recovery CoV	20.00%
Recovery lag	50% in second year after default and 50% in third year
Correlation defaults/Recoveries	10.0%
Conditional prepayment rate (CPR)	5.0%
Amortisation profile	Vector provided by the originator
Portfolio yield vector	Calculated from the loan-by-loan information
Fees (as modeled)	0.50%

Source: Moody's Investors Service

Tranching of the notes

To derive the level of losses on the notes, we applied the default distribution and the stochastic recovery distribution explained in section "Primary asset analysis" to numerous default scenarios on the asset side.

We have considered how the cash flows generated by the collateral are allocated to the parties within the transaction, and the extent to which various structural features of the transaction might themselves provide additional protection to investors, or act as a source of risk.

To determine the rating assigned to the notes, we used an expected loss methodology that reflects the probability of default for each series of notes times the severity of the loss expected for the notes. To allocate losses to the notes in accordance with their priority of payment and relative size, we used a cash-flow model (ABSROM) that reproduces many deal-specific characteristics such as the main input parameters of the model described above. Weighting each default scenario's severity result on the notes with its probability of occurrence, we calculated the expected loss level for each series of notes as well as the expected average life. We then compared the quantitative values to the Moody's Idealised Expected Loss table to determine the ratings assigned to each series of notes.

Additional structural analysis

Margin compression due to prepayments

By assuming 50% margin compression (i.e. 50% of CPR applied to highest interest rate paying loans), we stressed the yield vector derived from the line-by-line information applying a 0.39% yield haircut

Interest rate mismatch

44.3% of the pool balance corresponds to fixed-rate assets and 55.7% to floating-rate loans (the vast majority of them liked to Euribor), whereas the notes will be fixed rate liabilities.

As a result, the issuer is subject to interest rate mismatch risk (i.e. the risk that the interest rate on the notes will differ from the interest rate payable on the floating portion of the portfolio), given that the transaction is not hedged.

Floating portion of the portfolio: The main source interest rate mismatch risk arises from the Euribor being negative, which can erode the final interest rate paid on these assets. In this regard, according to the information provided by the originator, the floating portion of the portfolio can be split into two: (i) floating rate assets contractually subject to a Euribor floor of zero (around 50% of the pool balance, i.e. the majority of floating rates contracts); and (ii) floating rate leases not subject to a Euribor floor (around 6% of the pool balance).

For those assets with Euribor floors we assumed no interest rate mismatch risk. For the remaining floating rate loans not subject to a Euribor floor, and based on the current Euribor level and observed historical trends, we assumed a stressed (negative) Euribor on this portion.

Fixed portion of the portfolio: Given that the notes are fixed rate liabilities there is no interest rate type mismatch risk on this portion.

Commingling risk

All borrowers pay by direct debit mechanism into the dedicated collection account in the name of the servicer at the beginning of a month. Funds are then swept daily into the issuer's collection account (for more details on commingling risk, see section Detailed description of the structure).

Methodology and monitoring

Methodology

» Moody's Global Approach to Rating SME Balance Sheet Securitizations, July 2019

To access the reports, click on the entries above. Note that these references are current as of the date of publication of this report and that more recent reports may be available. All research may not be available to all clients.

Monitoring

We will monitor the transaction on an ongoing basis to ensure that it continues to perform in the manner expected, including checking all supporting ratings and reviewing periodic servicing reports. Any subsequent changes in the rating will be publicly announced and disseminated through Moody's Client Service Desk.

The following factors may have a significant impact on the subject transaction's rating: the performance of the underlying assets, the counterparty risk and Spain's country risk.

Monitoring report:

Data quality:

» The Investor report includes all necessary information for Moody's to monitor the transaction

» Undertaking to provide Moody's with updated pool cut on a periodical basis

Data availability:

» The frequency of the publication of the investor report is quarterly

» Investor reports publicly available on the Management Company website

» The Management Company will provide Moody's with periodic information on the status of the SPV and the performance of the loans

Appendix 2: Originator and Servicer detail

Exhibit 27
Originator and servicer detail

Originator ability:	
Originator overview	CaixaBank is Spain's third-largest banking group by total assets. Although it has a nationwide franchise, the group is particularly strong in Catalonia and Navarra, where it holds leading market shares. Catalonia is one of Spain's wealthiest regions and has a diversified economy. Nationwide, CaixaBank held around 16% of deposits and 16% of loans as of September 2019, and had the largest branch network, with an around 18% market share. CaixaBank's 13.7 million customers as of September 2019 (15.6 million including Banco BPI) are serviced by a one-stop distribution model for finance and insurance needs.
Sales and marketing practices:	» Number of employees: Group: 35,669; excluding BPI: 30,800 (as of September 2019)
	» Number of branches in Spain: 4,254 branches (as of September 2019)
Underwriting policies and procedures:	» CaixaBank's analytical approach is primarily based on the borrower's repayment capacity rather than the nature of the securities pledged
	» Internal rating and credit scoring: The several internal rating and credit scoring systems in place play a key role in CaixaBank's underwriting process. The entity has several different models, among these: three for SMEs depending on the obligor's size, one for real estate developers and one for large corporates. The scoring system for self-employed individuals is a very efficient tool, with scores updated monthly. The same efficiency is detected in the internal rating system for corporates, where the internal ratings are updated annually (when the financial statements are published) but also operational alerts are periodically shown. For SMEs, ratings are updated on a monthly basis. Both systems have already been certified by the Bank of Spain (so the size of regulatory capital needed is estimated with them)
	» Approval mechanisms to cover specific segments, distinguishing between retail banking, business centres, real estate business centres, institutional banking centres, international offices and corporate banking centre
	» System of authorisation limits based on expected loss or nominal amount.
	» Electronic file as a procedure for managing applications
	» Individual customer segment: risk-adjusted price control systems for mortgage applications through differentiated authorisation limits
	» Business segment: Risk metrics in the approval process: (a) Ratings: essential element in the analysis. Controls are set up to ensure that the ratings are used in analysing the risk of each loan. If the rating has not been updated the system rejects the operation; (b) System of risk adjusted prices. This complements the assessment of risk adjusted return at customer level, calculated monthly as benchmark spread (risk cost) versus margin on risk (customer level margin)
	» Employees have authority to grant small loans to borrowers with high exposure, therefore streamlining processes
	CaixaBank has an authorization system for approving risks based on the level assigned to the various approving bodies. Loan approval is generally performed at the branch level.
Collateral valuation policies and procedures:	» Valuation process: In line with standard practise in the market (valuators certified by the Bank of Spain)
Closing policies and procedures:	» In line with the market standards
Credit risk management:	» The Board of Directors determines the group's risk policies and delegates the creation of risk management committees
	» Global risk committee: In charge of a comprehensive management of the Group's risks, among them credit risk. It establishes a series of triggers whose breach prompts, depending on the type of risk, different alerts, communications, and courses of action at different levels of the organisation
	» Credit committee: Analyses and, if appropriate, approves operations within its level of responsibility, referring those outside the bounds of its authority to the Board of Directors.
	» Risk measurement models: Tools and techniques based on specific needs of each type of risk, including ratings, scorings, probability of default (PD), loss given default (LGD) and exposure at default (EAD). The models are integrated into management and monitoring
	» Banking Business Management model implemented throughout the organisation down to the branch level
	» The branches have innovative tools on hand to assist them with global management of all the business they generate
	» The internal models for measuring credit risk have received approval from the Bank of Spain

Originator stability:	
Originator rating:	Caixabank (Long Term Deposit Rating: A3 Not on Watch / Short Term Deposit Rating: P-2 Not on Watch; Long Term Counterparty Risk Assessment: A3(cr) Not on Watch /Short Term Counterparty Risk Assessment: P-2(cr) Not on Watch; Outlook: Stable)
Regulated by:	» BCE / Bank of Spain
Management strength and staff	» Staff have access to policies via the intranet
	» Employees are trained on a continuous basis to meet area and market needs
Quality controls and audits:	» Internal audit division: continuously monitors internal control systems and checks the accuracy of the risk measurement and control methods employed by the various divisions involved in risk monitoring
	» CaixaBank carries out annual external audits
Arrears management:	
Staff description:	» CaixaBank has a staff of around 342 supervising the recovery process, which is carried out at different levels of the organisation, starting at the branch level. The document preparation tasks (before the judicial process) are outsourced to Caixabank Operational Services, a company fully owned by CaixaBank
Early stage arrears practices:	» CaixaBank checks daily the debtors' accounts in case of unpaid positions in order to collect any amount in such accounts
	» Early stage arrears includes communication with the borrower through different channels (telephone calls, letters)
Late stage arrears practices:	» Pre-litigation process (where legal file for litigation is prepared) can generally begin after 45 days in arrears. For loans backed by a mortgage pre-litigation starts at day 61. For unsecured loans legal proceedings starts at around day 110. In cases where legal procedures have weaker chances (overdrafts, credit cards) the "friendly" recovery phase is exhausted, and legal proceedings starts at around 270-365
	» CaixaBank works with a group of external lawyers for litigation matters
	» CaixaBank can repossess properties in case of void auctions
	» Even after default (formal write-off) of the loan, branches remain responsible of further recovery actions, with the help of external specialised companies
Loan modifications:	» Not made available

Source: Moody's Investors Service, based on the data received from the Originator

Appendix 3: Eligibility criteria and waterfall

Eligibility criteria

The key eligibility criteria are as follows:

- All the loans/lines of credit have been either formalised under public deed or through a private contract
- The pool does not include lease contracts or syndicated loans
- Euro-denominated contracts pay by direct debit
- All contracts have been originated by CaixaBank following its underwriting standards
- 5% of the definitive portfolio may be composed of contracts that are delinquent no more than 30 days. 1% of the definitive portfolio may be composed of contracts that are delinquent between 30 and 90 days
- All contracts are regulated by Spanish law
- The principal of all securitised loans and draws/redraws under lines of credits has been 100% disbursed (notwithstanding there can be other separate drawdowns not included in the portfolio)
- There are no refinanced/restructured contracts (as currently defined by the Bank of Spain)

Waterfall

Allocation of payments/pre accelerated waterfall: On each quarterly payment date, the Issuer's available funds will be applied in the following simplified order of priority:

1. Senior fees and expenses
2. Interest on Class A notes
3. Principal on Class A notes

4. Fill-up of the cash reserve account up to the required level (for as long as Class A bonds are still outstanding)
5. Interest on Class B notes
6. Principal on Class B notes
7. Fill-up of the cash reserve account up to the required level (once Class A bonds have fully amortised)
8. Junior fees and expenses

Allocation of payments/post accelerated waterfall:

1. Senior fees and expenses
2. Interest on Class A notes
3. Principal on Class A notes
4. Interest on Class B notes
5. Principal on Class B notes
6. Junior fees and expenses

Appendix 4: Management Company main responsibilities

The main responsibilities of the Management Company are the following:

» Handling the accounting of the SPV with due separation from that of the Management Company

» Complying with its formal, documentary and reporting duties to the Spanish Securities Market Commission (Comisión Nacional del Mercado de Valores or CNMV), the rating agencies and any other supervisory bodies

» Appointing and, if necessary, replacing and dismissing the auditor responsible for reviewing and audit the SPV's annual accounts

» Validating and controlling the information it receives from the Servicer regarding the loans

» Complying with the calculation duties provided for and taking the actions laid down in the Deed of Constitution and in the Prospectus

» Checking that the amounts actually paid to the SPV match the amounts that must be received by the SPV

» Calculating and determining on each determination date the principal to be amortised and repaid on each bond series on the relevant payment date

» Verifying that the amounts credited to the treasury account return the yield set in the agreement

» Instructing the transfer of funds between the various borrowing and lending accounts, and issuing all relevant payment instructions, including those allocated to servicing the bonds

» Calculating the available funds, the available funds for the notes amortisation, the liquidation available funds and the payment or withholding obligations to be complied with, and applying the same in the priority of payments or, as the case may be, in the liquidation priority of payments

» The management company may extend or amend the agreements entered into on behalf of the SPV, and substitute, as necessary, each of the SPV's service providers on the terms provided for in each agreement

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