

# Creditreform Covered Bond Rating

BNP Paribas Home Loan SFH  
Mortgage Covered Bond Program

## Rating Object

Country Issuer	France	Repayment method	Hard & Soft Bullet
Cover pool asset class	Mortgage	Overcollateralization	Min (5,00%)
Legal framework	SFH legislation		Current (41,04%)
Nominal value	EUR 26.564,47 m.	Covered bonds coupon type	Committed (8,11%)
Cover pool value	EUR 37.466,29 m.		Fix (97,36%)
WAL maturity covered bonds	4,53 (Years)	Other (0,00%)	Floating (2,64%)
WAL maturity cover pool	6,86 (Years)		
Cut-off date Covered Pool Information:		31.03.2020	

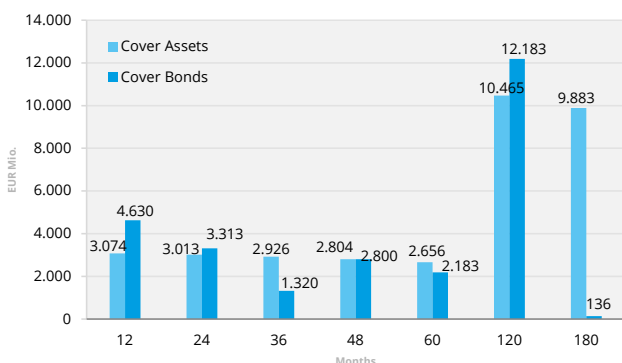
## Rating Overview

Rating Summary		Credit Risk Metrics	
Issuer	BNP Paribas Home Loan SFH	Metrics date	08.08.2019
LT Issuer Rating	A-	Rating Case Default Rate	36,55%
ST Issuer Rating	L2	Rating Case Recovery Rate	59,41%
+Legal and regulatory framework analysis	+4 Notches	Expected Loss	14,84%
+Liquidity and refinancing risk	+1 Notch	Rating Case Breakeven OC	20,76%
= Rating after 1st uplift	AA+	<i>Program Key Counterparties</i>	
Cover Pool & cash flow analysis	AAA	Servicer	BNP Paribas SA
+ 2nd rating uplift	+1 Notch	Account Bank	BNP Paribas SA
Rating covered bond program / Outlook	<b>AAA "Watch Negative"</b>	Sponsor	NA

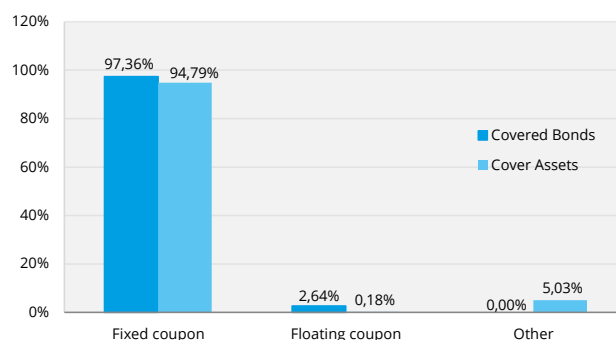
## Cover Assets Composition

General Information		Property Type	
Cover Pool Balance	EUR 37.466,29 m.	Residential	EUR 34.821,29 m.
Average Seasoning	51,71 Months	Commercial	EUR 0,00 m.
Total number of exposures	333.268	Other	EUR 0,00 m.
Distribution by type of asset		Distribution by Loan size	
Mortgages	EUR 34.821,29 m.	Number of Commercial Loans	0
Public Sector	EUR 0,00 m.	Number of Residential Loans	333.268
Shipping	EUR 0,00 m.	Average Size Commercial Loans (000s)	0
Substitute Assets	EUR 2.645,00 m.	Average Size Residential Loans (000s)	104
Other	EUR 0,00 m.		

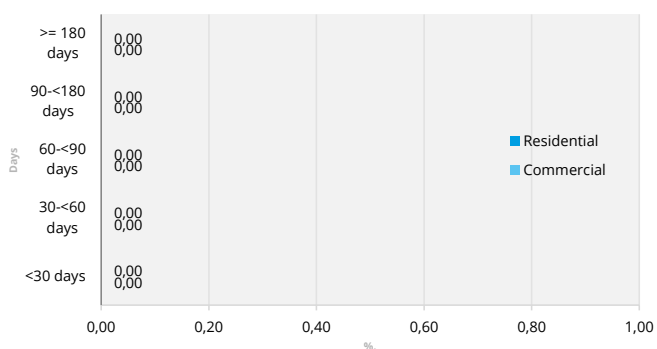
Asset-liability Profile



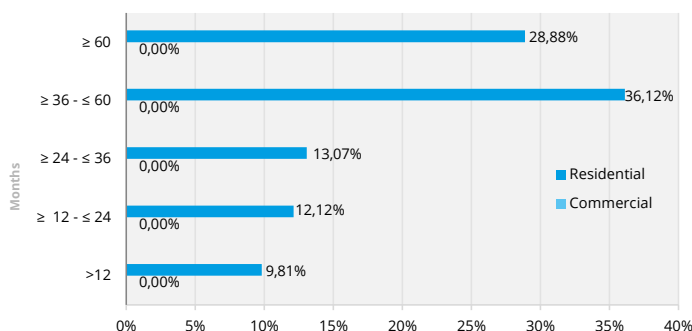
Interest Rate



Arrears Distribution



Seasoning Distribution



# Creditreform Covered Bond Rating

BNP Paribas Home Loan SFH  
Mortgage Covered Bond Program

**Creditreform**  
**Rating**

Unindexed LTV Distribution Commercial Loans			Unindexed LTV Distribution Residential Loans		
LTV	Nominal	% Loans	LTV	Nominal	% Loans
>0 - <=40 %	NA	NA	>0 - <=40 %	7.334,15	21,06%
>40 - <=50 %	NA	NA	>40 - <=50 %	3.740,69	10,74%
>50 - <=60 %	NA	NA	>50 - <=60 %	4.172,68	11,98%
>60 - <=70 %	NA	NA	>60 - <=70 %	4.436,91	12,74%
>70 - <=80 %	NA	NA	>70 - <=80 %	4.589,09	13,18%
>80 - <=90 %	NA	NA	>80 - <=90 %	5.221,21	14,99%
>90 - <=100 %	NA	NA	>90 - <=100 %	5.326,56	15,30%
>100%	NA	NA	>100%	0,00	0,00%

Currency Distribution			Loan Distribution by Regions (as % of total Mortgages)		
Currency	Covered Bonds	Cover Assets	Region	% Residential Loans	% Commercial Loans
EUR	26.564,47 m.	34.821,29 m.	Alsace	1,32%	NA
AUD	0,00 m.	0,00 m.	Aquitaine	5,42%	NA
BRL	0,00 m.	0,00 m.	Auvergne	0,73%	NA
CAD	0,00 m.	0,00 m.	Basse Normandie	1,07%	NA
CHF	0,00 m.	0,00 m.	Bourgogne	0,98%	NA
CZK	0,00 m.	0,00 m.	Bretagne	2,93%	NA
DKK	0,00 m.	0,00 m.	Centre	1,96%	NA
GBP	0,00 m.	0,00 m.	Champagne Ardennes	0,79%	NA
HKD	0,00 m.	0,00 m.	Corse	0,48%	NA
JPY	0,00 m.	0,00 m.	DOM - TOM	0,48%	NA
KRW	0,00 m.	0,00 m.	Franche-Comté	0,70%	NA
NOK	0,00 m.	0,00 m.	Haute Normandie	2,63%	NA
PLN	0,00 m.	0,00 m.	Ile-de-France (Paris included)	40,87%	NA
SEK	0,00 m.	0,00 m.	Languedoc-Roussillon	3,49%	NA
SGD	0,00 m.	0,00 m.	Limousin	0,30%	NA
USD	0,00 m.	0,00 m.	Lorraine	1,66%	NA
Other	0,00 m.	0,00 m.	Midi-Pyrénées	5,01%	NA
			Nord-Pas-de-Calais	4,41%	NA
			Pays de la Loire	4,27%	NA
			Picardie	2,57%	NA
			Poitou-Charentes	1,32%	NA
			Provence-Alpes-Côte-d'Azur	8,68%	NA
			Rhône-Alpes	7,92%	NA

## Swap Counterparties

Name	Type of arrangement	LEI
BNP Paribas SA	FX	ROMUWSFPU8MPRO8K5P83

## Swap Agreements

Interest Rate Swap	NA
Currency Swap	Intra-group

## ISIN Lists

Issuer	ISIN	Coupon Type	Coupon Rate (%)	Issue date	Maturity date
BNP Paribas Home Loan SFH	FR0010887133	Fix	3,75	20.04.2010	20.04.2020
BNP Paribas Home Loan SFH	FR0013184280	Fix	0,23	22.06.2016	22.05.2024
BNP Paribas Home Loan SFH	FR0013238797	Fix	0,38	22.02.2017	22.07.2024
BNP Paribas Home Loan SFH	FR0013078755	Fix	0,95	22.12.2015	22.12.2025
BNP Paribas Home Loan SFH	FR0013106622	Fix	0,25	02.02.2016	02.09.2021
BNP Paribas Home Loan SFH	FR0013469368	Fix	0,07	16.12.2019	16.12.2028
BNP Paribas Home Loan SFH	FR0013234200	Fix	0,80	27.01.2017	27.01.2027
BNP Paribas Home Loan SFH	FR0013371531	Fix	0,73	11.10.2018	11.05.2026
BNP Paribas Home Loan SFH	FR0010988873	Fix	3,75	11.01.2011	11.01.2021
BNP Paribas Home Loan SFH	FR0012735249	Fix	1,51	26.05.2015	26.05.2035
BNP Paribas Home Loan SFH	FR0011470921	Fix	1,38	17.04.2013	17.06.2020
BNP Paribas Home Loan SFH	FR0011164862	Floating	EIEUR1M + 1.4	14.12.2011	14.12.2020
BNP Paribas Home Loan SFH	FR0011075167	Fix	3,88	12.07.2011	12.07.2021
BNP Paribas Home Loan SFH	FR0011223205	Fix	3,13	22.03.2012	22.03.2022
BNP Paribas Home Loan SFH	FR0012716371	Fix	0,38	07.05.2015	07.05.2025
BNP Paribas Home Loan SFH	FR0012843324	Fix	0,82	08.07.2015	08.07.2022
BNP Paribas Home Loan SFH	FR0013078748	Fix	0,67	22.12.2015	22.12.2023
BNP Paribas Home Loan SFH	FR0013420957	Fix	0,09	22.05.2019	22.05.2025
BNP Paribas Home Loan SFH	FR0012383883	Fix	0,74	19.12.2014	20.02.2023
BNP Paribas Home Loan SFH	FR0013234192	Fix	0,34	27.01.2017	15.02.2023
BNP Paribas Home Loan SFH	FR0013371499	Fix	0,89	11.10.2018	11.07.2027
BNP Paribas Home Loan SFH	FR0013140142	Fix	1,59	29.03.2016	29.03.2036
BNP Paribas Home Loan SFH	FR0012300754	Fix	0,88	14.11.2014	14.11.2024
BNP Paribas Home Loan SFH	FR0011137611	Fix	3,75	27.10.2011	27.10.2023

### Data Definitions

The data is presented with a cut-off date. Following the clarification regarding the source of information:

Issuer: Issuer source of information are all available public information, i.e. Investor Reports, Harmonised Transparency Templates "HTT", National Transparency Templates "NTT", Prospectus etc. Not reported or non available information will be labeled as "NA".

Field Name	Source	Definition
Cover pool asset class	Issuer	The asset type in the cover pool (public sector assets or mortgage assets)
Legal framework	CRA	The set of legislative and regulatory rules of the respective jurisdiction that regulates the covered bonds (CB) program
Nominal value	Issuer	The total amount of outstanding covered bonds as of cut-off date expressed in millions
Cover pool value	Issuer	Aggregate value of all assets in the cover pool as of cut-off date expressed in millions
WAL maturity covered bonds	Issuer	The weighted average remaining maturity of all outstanding covered bonds in years
WAL maturity cover pool	Issuer	The weighted average remaining maturity of all outstanding covered assets in years
Repayment method	Issuer	Hard Bullet: Covered bonds are repaid on the maturity date which cannot be extended Soft Bullet: The maturity date of the covered bonds can be extended by a fixed period Conditional pass-through (CPT): Covered bonds with a scheduled maturity date, and an extension mechanism defined by certain conditions
Overcollateralization	Issuer	Current OC: The proportion of cover assets that exceeds the proportion of currently outstanding covered bonds, calculated as $(\text{Cover pool value} / \text{outstanding covered bonds} - 1) * 100$ Min OC: The OC level that the issuer must maintain according to the respective CB legislation Committed OC: The minimum OC level that the issuer has committed to maintain
Covered bonds coupon type	Issuer	Type of interest rate paid on covered bonds, expressed as a percentage of bond's face value
LT Issuer Rating	CRA	Long-term ratings assess the default risks for each category of a bank's financial instruments with a residual term-to-maturity of more than one year
ST Issuer Rating	CRA	Short-term ratings assess the default risks for each category of a bank's financial instruments with a residual term-to-maturity of less than one year
Legal and regulatory framework analysis	CRA	A qualitative assessment of legislative and regulatory rules of the covered bonds program
Liquidity and refinancing risk	CRA	A qualitative assessment of regulatory requirements for liquidity and refinancing risk of the covered bonds program
First rating uplift	CRA	The rating after adding up the notches from Legal and regulatory framework analysis and Liquidity and refinancing risk with LT Issuer rating
Cover pool and cash flow analysis	CRA	The quantitative assessment of the cover assets and covered bonds at different rating-level stressed scenarios
Second rating uplift	CRA	The rating after adding up the notches from cash-flow analysis with 1st rating uplift (only effective if the rating from cash-flow analysis is higher than the 1st rating uplift)
Metrics date	CRA	The date on which CRA assigned the initial / follow-up rating of the covered bond program
Rating Case Default Rate (RDR)	CRA	Stressed default rate of the cover assets represented by the base case stressed scenario
Rating Case Recovery Rate (RRR)	CRA	Stressed recovery rate of the defaulted assets represented by the base case stressed scenario
Expected Loss	CRA	Stressed loss rate of the cover assets represented by the base case stressed scenario. The expected loss rate has been calculated as $[\text{RDR} * (1 - \text{RRR})]$ [%]
Rating Case Breakeven OC	CRA	The required stressed OC level compatible with the base case rating
Average Seasoning	Issuer	Average length of the loans from the origination date to the cut-off date in months
Loan Size	Issuer	Average size of the loans (i.e. Total value of cover assets / Number of loans)
LTV	Issuer	The loan-to-value (LTV) is the ratio of a loan to the value of the property securing the loan
LEI	CRA	Legal Entity Identifier (LEI) enables unique identification of legal entities in financial transactions
Arrears Distribution	Issuer	The distribution of arrears of the cover assets with respect to each asset class
Seasoning Distribution	Issuer	The distribution of seasoning of the cover assets with respect to each asset class
Asset liability Profile	CRA	The maturity structure of the cover assets and liabilities
% Residential Loans	Issuer	Outstanding value of loans that are secured by the residential property expressed as % of total outstanding loans in the cover pool
% Commercial Loans	Issuer	Outstanding value of loans that are secured by the commercial property expressed as % of total outstanding loans in the cover pool
Fixed Coupon	Issuer	All assets and liabilities in the covered bond program that yield a fixed interest rate
Floating Coupon	Issuer	All assets and liabilities in the covered bond program that have variable interest rates
EIEURxM	Reuters	Euro x Month EURIBOR
EURSWEXY	Reuters	Euro x Year Interest Rate Swap Fixing

#### Disclaimer

© Creditreform Rating AG, 2020. This report is protected by copyright. Any commercial use is prohibited without prior written permission from Creditreform Rating AG. Only the full report may be published in order to prevent distortion of the report's overall assessment. Excerpts may only be used with the express consent of Creditreform Rating AG. Publication of the report without the consent of Creditreform Rating AG is prohibited. Only ratings published on the Creditreform Rating AG web pages remain valid.

We have assumed that the publicly available information, and the documents and information provided to us by the client are complete and accurate and that the copies provided to us represent the full and unchanged contents of the original documents. Therefore, Creditreform does not and cannot independently verify or validate information in every instance during the rating process. Further, Creditreform Rating AG assumes no responsibility for the true and fair representation of the original information.

Future events are uncertain, and forecasts are necessarily based on assessments and assumptions. The information in this report and in other types of credit opinions by Creditreform are provided "as is" without representation or warranty of any kind. This rating is therefore no statement of fact, but an opinion. No representation or warranty, express or implied, as to the accuracy, timeliness, completeness, merchantability or fitness for any particular purpose of any such information is made by Creditreform in any form or manner whatsoever. For this reason, Creditreform Rating AG or its directors, officers, employees, independent contractors, agents, representatives, licensors or suppliers cannot be held liable for the consequences of decisions made on the basis of any of their ratings or assumptions and assessments expressed in this report. Neither should ratings, assumptions or assessments expressed in this report, be construed as recommendations for investors, buyers or sellers. They should only be used by market participants (entrepreneurs, bankers, investors etc.) as one factor among others when arriving at corporate or investment decisions. Ratings or assumptions and assessments expressed in this report are not meant to be used as substitutes for one's own research, inquiries and own assessments.

ANY RATING PERFORMED BY CREDITREFORM RATING AG IS SUBJECT TO THE CREDITREFORM RATING AG CODE OF CONDUCT, WHICH HAS BEEN PUBLISHED ON THE WEB PAGES OF CREDITREFORM RATING AG. IN THIS CODE OF CONDUCT, CREDITREFORM RATING AG COMMITS ITSELF – SYSTEMATICALLY AND WITH DUE DILIGENCE – TO ESTABLISH ITS INDEPENDENT AND OBJECTIVE OPINION AS TO THE SUSTAINABILITY, RISKS AND OPPORTUNITIES CONCERNING THE ENTERPRISE OR THE ISSUE UNDER REVIEW.