Covered Bonds follow-up Rating

BNP Paribas Home Loan SFH

Mortgage Covered Bond Program

Creditreform Rating

Rating Object	Rating Information	
BNP Paribas Home Loan SFH, Mortgage Covered Bond Program	Rating / Outlook : **AAA / watch negative**	Type: Rating Update (unsolicited)
Type of Issuance : Mortgage Covered Bond under French law Issuer : BNP Paribas Home Loan SFH	Rating Date :	30 July 2020
	Rating Renewal until :	Withdrawal of the rating
LT Issuer Rating : A- (BNP Paribas SA) ST Issuer Rating : L2 Outlook Issuer : Watch Negative	Maximum Validity:	01 January 2050
	Rating Methodology :	CRA „Covered Bond Ratings"

Program Overview

Nominal value	EUR 26,564 m.	WAL maturity covered bonds	4.53 Years
Cover pool value	EUR 37,466 m.	WAL maturity cover pool	6.86 Years
Cover pool asset class	Mortgages	Overcollateralization (nominal/committed)	41.04%/ 8.11%
Repayment method	Hard & Soft Bullet	Min. overcollateralization	5.00%
Legal framework	Under the SFH Legislation	Covered bonds coupon type	Fix (97.36%), Floating (2.64%)

Cut-off date Cover Pool information: 31 March 2020.

Content

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Rating Action

This follow-up report covers our analysis of the mortgages covered bond (hard- and soft bullet) program issued under French law by BNP Paribas Home Loan SFH („BNP Paribas SFH"). The total covered bond issuance at the cut-off date (31 March 2020) had a nominal value of EUR 26,564.47 m, backed by a cover pool with a current value of EUR 37,466.29 m. This corresponds to a nominal overcollateralization of 41.04%. The cover assets include French mortgages obligations.

Taking into consideration the issuer rating, our analysis of the regulatory framework, liquidity- and refinancing risks, as well as our cover pool assessment and results of the cash flow analysis, Creditreform Rating AG ("Creditreform Rating" or "CRA") affirms the covered bond program with an AAA rating. However, as the medium and long-term effects of the Corona crisis on the issuer rating and cover pool assessment is not foreseeable at the moment, has the outlook of the program been set at "watch negative". The AAA rating represents the highest level of credit quality and the lowest investment risk.

Key Rating Findings

- \+ Covered Bonds are subject to strict legal framework (SFH legislation)
- \+ Covered Bond holders have full recourse to the issuer.
- \+ Current high overcollateralization (OC) of 41.04% as of 31 March 2020
- +/- Covid-19 can lead to sustained changes in the cover pool
- \- A strong dependency on the economy in Europe, as more than two-thirds of the operating income of BNP Paribas is generated in Europe

Table1: Overview results

Risk Factor	Result
Issuer rating	A- (rating as of 18 November 2019)
+ Legal and regulatory framework	+4 Notches
+ Liquidity and refinancing risk	+1 Notch
= Rating after 1st uplift	AA+
Cover pool & cash flow analysis	AAA
+ 2nd rating uplift	+1 Notch
= Rating covered bond program	AAA

Issuer Risk

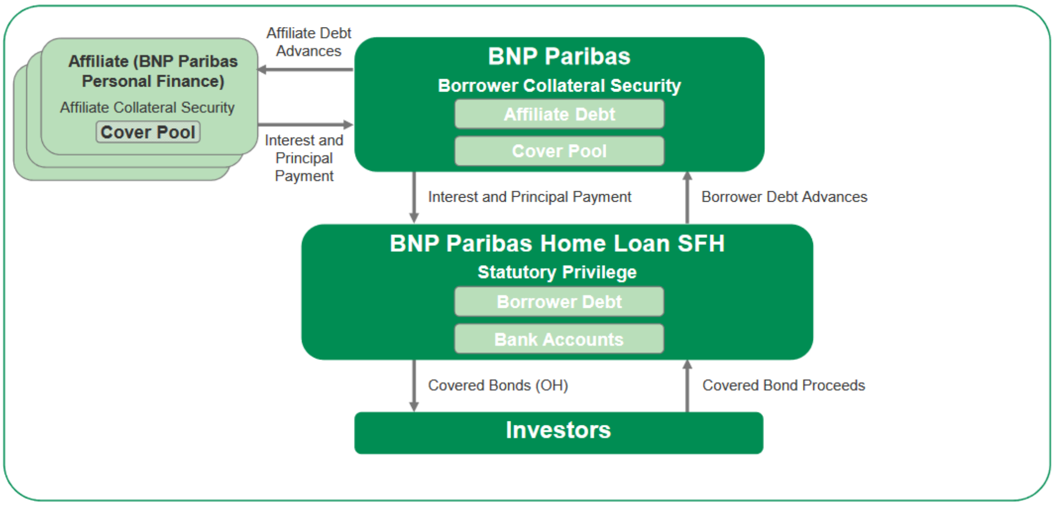
Issuer

Our rating of BNP Paribas Home Loan SFH covered bond program is reflected by our issuer rating opinion of BNP Paribas SA (group) due to its group structure. CRA has affirmed the Long-Term issuer rating of BNP Paribas Home Loan SFH at A- in a Rating Update dated 18 November 2019. Subsequently the issuer rating outlook was set at 'watch negative' during the monitoring dated 24 March 2020. Responsible for this decision was the potential high uncertainty for all market actors due to the ongoing corona crisis. For a more detailed overview of the issuer rating, please refer to the issuer rating report published on the webpage of Creditreform Rating AG.

Structural Risk

Transaction structure

Figure1: Overview of Covered Bond emission | Source: BNP Paribas Home Loan SFH



Legal and Regulatory Framework

In France, there exist three different types of covered bonds – 'Obligations Foncières' (OF), 'Caisse de Refinancement de l'habitat' (CRH) and 'Obligations de Financement de l'habitat' (OH) – governed by different legal frameworks.

An affiliated company – the 'Sociétés de Financement de l'Habitat (SFH), which is a regulated French specialized credit institution with the restricted purpose to provide and fund home loans, issues OHs. As the issuer is not the originator, the cover assets are owned by and segregated in the sponsor bank but pledged and transferred to the SFH. The SFHs have to obey the laws and regulations codified by Articles L.515-35 of the French Monetary and Financial Code.

Under the SFH legislation, the OH holders has direct recourse to the issuer and legal privilege over the SFH's eligible cover assets, which are first-rank residential home mortgages or other real estate security interests similar to first-rank mortgages confined mainly to EU/EEA countries. Furthermore, other countries are allowed as far as they achieve the highest possible credit rating by an approved external rating agency.

Along with the nomination of two external statutory auditors, the legal framework stipulates to nominate an independent Specific Controller to monitor the cover pool.

In case of issuer's insolvency, the general insolvency court will manage the cover pool and will act in the interest of the covered bondholders. The SFH issuers have to disclose information regarding cover assets and covered bond programs on their website on a regular basis as well.

In general, we consider the structural framework for covered bond programs in France as positive as SFH legislation defines clear rules to mitigate risks in particular regarding insolvency remoteness, asset segregation, investor's special claim vis-à-vis other creditors, the roll and appointment of a special administrator, among other provisions. Due to those reasons we have set a rating uplift of four (+4) notches for the regulatory and structural framework for French covered bond programs under SFH legislation.

Liquidity- and Refinancing Risk

With respect to OHs, it is compulsory for the covered bond issuers to maintain a nominal overcollateralization (OC) of 5% at all times, while the coverage calculations have to be done on a monthly basis. Furthermore, the Issuer is also required to maintain a liquidity buffer to cover, for the next 180 days, all debt service outflows (interest and principal) and derivative transactions.

The underlying cover pool is also subjected to an asset-coverage test in order to ensure sufficient OC level and cash flow adequacy. SFH must manage and hedge interest rate risks, currency risks, and liquidity and maturity mismatches between assets and liabilities.

In the event of the issuer's insolvency, the special administrator (i.e. general insolvency court) can sell assets of the cover pool or use them as a guarantee for liquidity operations if liquidity shortfalls are foreseeable.

The European Commission on November 2019 has also adopted the legislative package to provide for enhanced harmonisation of the EU covered bond market. Each of the Member States shall implement the Covered Bond Directive by 8 July 2021 and the national measures shall be applied at the latest from 8 July 2022. Once fully implemented, the directive might have a potential impact on the legal and regulatory framework for the issuer and the covered bonds of each EU member states.

In general, the SFH legislation and the stipulated risk management processes for liquidity risks constitute a comparatively strict framework by which they can be effectively reduced. Refinancing risks, however, may not be structurally reduced under the hard bullet repayment structure, which can only be cushioned by sufficiently high overcollateralization or by other liquid funds. It is worth to mention that, several SFH programs count with more flexible repayment structures (e.g. soft-bullet structures). Overall, we assess the legal provisions on liquidity management for French Covered Bond programs under SFH legislation as positive and set a rating uplift of one (+1) notch.

For a more comprehensive overview of the regulatory framework (SFH legislation) of French covered bond programs, please refer to our initial rating reports of BNP Paribas Home Loan SFH Covered Bonds published on August 2019.

ESG Criteria

CRA generally takes ESG-relevant factors (environmental, social and governance) into account when assessing Covered Bond ratings. Overall, ESG factors have a significant impact on the current rating of this Covered Bond program. CRA identifies governance factors, in particular, to have a highly significant impact on Covered Bond ratings. Since Covered Bonds are subject to strict legal requirements, regulatory risk plays an important role in assessing the credit rating. The SFH legislation defines clear rules to mitigate risks in particular regarding insolvency remoteness, asset segregation, investor's special claim vis-à-vis other creditors, the roll and appointment of a special administrator, among other provisions. Additionally, Risk management and internal controls as well as the macroeconomic factors such as hedging strategies, interest rates and yield curve are considered to have a highly significant impact on the assessment of the credit rating. Other individual factors with a potential key rating influence were not identified, and therefore did not affect the final rating.

Credit and Portfolio Risk

Cover pool analysis

The analysis of the cover pool is based on public information which has been made available by the Issuer, in particular the Harmonised Transparency Template („HTT ") as per regulatory requirements. This information was sufficient according to CRA´s rating methodology "Covered Bond Ratings".

At the cut-off-date 31 March 2020, the pool of cover assets consisted of 333,268 debt receivables, of which 100.00% are domiciled in France. The total cover pool volume amounted to EUR 37,466.29 m in residential (100.00%), commercial (0.00%) and others (0.00%) loans.

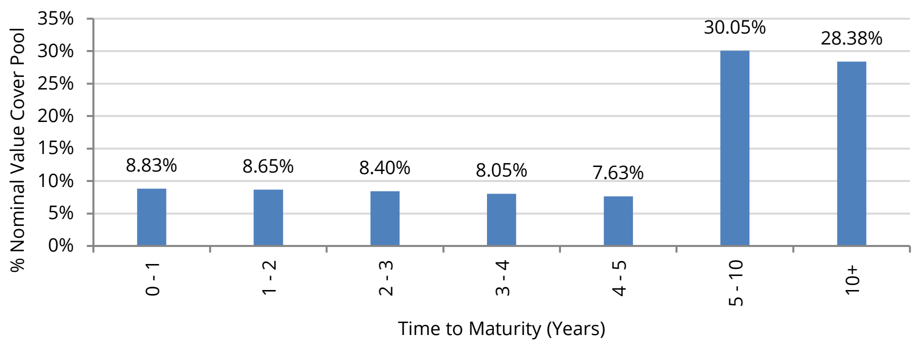
The residential cover pool consists of 333,268 mortgage loans having an Unindexed weighted average LTV of 62.51% . The cover pool doesn't have any non-residential loans. The ten largest debtors of the portfolio total to 0.03%. Table 2 displays additional characteristics of the cover pool:

Table 2: Cover pool characteristics | Source: BNP Paribas SFH

Characteristics	Value
Cover assets	EUR 37,466 m.
Covered bonds outstanding	EUR 26,564 m.
Substitute assets	EUR 2,645 m.
Cover pool composition	
Mortgages	92.94%
Substitute assets	7.06%
Other / Derivative	0.00%
Number of debtors	NA
Mortgages Composition	
Residential	100.00%
Commercial	0.00%
Other	0.00%
Average asset value (Residential)	EUR 104.48 k.
Average asset value (Commercial)	NA
Non-performing loans	0.00%
10 biggest debtors	0.03%
WA seasoning	51.71 Months
WA maturity cover pool (WAL)	6.86 Years
WA maturity covered bonds (WAL)	4.53 Years

We have listed an extended view of the composition of the cover pool in the appendix section “Cover pool details”. The following chart displays the maturity profile of the cover assets at the cut-off date 31 March 2020 (see figure 2):

Figure 2: Distribution by remaining time to maturity I Source: BNP Paribas SFH



Maturity profile

The following charts present the cash flow profile of the Issuer (see figure 3 and figure 4):

Figure 3: Cover asset congruence | Source: BNP Paribas SFH

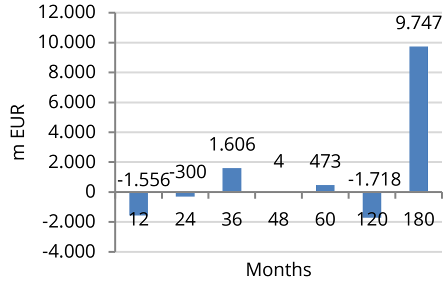
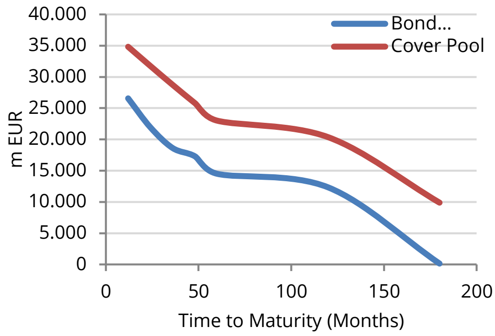


Figure 4: Amortization profile | Source: BNP Paribas SFH



During its cash flow modelling, CRA has taken into consideration the maturity structure of cover assets and liabilities. This structure was an integral part of the cash flow analysis.

Interest rate and currency risk

This covered bond program uses derivatives to hedge currency risk. The legal framework also provides for quarterly stress tests to be conducted on interest rate- and currency risks to maintain the mandatory OC. Therefore, interest rate risk could be mitigated by the 5% OC requirement. Nevertheless, we have applied interest rate stresses on the cash flows for each rating level according to our methodology. The overall rating impact of interest rate mismatches has been incorporated in our Breakeven Analysis segment.

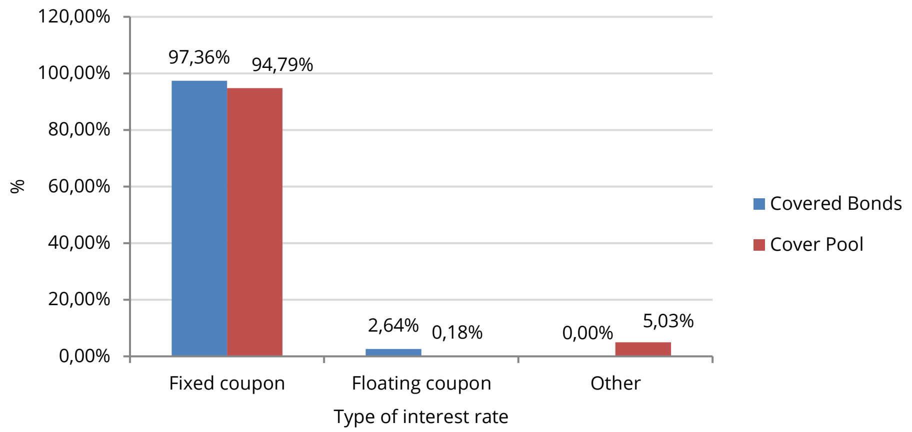
Table 3: Program distribution by currency after hedging | Source: BNP Paribas SFH

Currency	Volume	Share (%)
*Cover Pool**		
EUR	34,821 m.	100.00%
Covered Bond		
EUR	26,564 m.	100.00%

*excluding substitue assets

Figure 5 shows the types of interest rate used in this program:

Figure 5: Type of interest rate | Source: BNP Paribas SFH



Credit Risk

The credit risk assessment for Mortgage Covered Bond have been determined in accordance with CRA rating methodology for Covered Bonds by means of historical data and particular parameters from the Covered Bonds.

Due to the high granularity of mortgage pools we have characterized these portfolios as big enough and with a homogeneous composition i.e. ("Large Homogeneous Portfolio", LHP). Furthermore, under that premise we have assumed that it is possible to derive a loss distribution. CRA has used the issuer's historical NPL ratios to derivate a conservative default rate proxy for the approximation through the LHP distribution. For the BNP Paribas SFH it has been assumed an expected default rate of 1.46% for the LHP. Furthermore, CRA has considered a 15.00% correlation to define the LHP distribution. Table 4 disclosed the expected default rate for each relevant rating level.

In order to derive recovery and loss-severity base case assumption, CRA has used historical data from mortgage price indexes. To determine loan-level recovery assumptions the resulting stressed recoveries assumptions were compared with the portfolio's existing loan-to-value ratios (LTVs).

Based on the default rates and taking into account the recovery assumptions, the following loss assumptions were determined for the current cover pool (see Table 4):

Table 4: Cover Pool Base case assumptions | Source: CRA

Rating	Default Rate (%)	Recoveries (%)	Expected Loss (%)
AAA	36.55%	65.61%	12.57%
AA+	33.63%	67.21%	11.03%
AA	29.07%	70.12%	8.69%
AA-	25.27%	72.71%	6.90%
A+	23.76%	73.89%	6.20%
A	23.73%	73.89%	6.20%
A-	22.73%	74.70%	5.75%

Cash-Flow Analysis

Model Assumptions

Based on public information and using the base case loss assumptions, we implement a scenario-based cash flow model. This model aims to test the ability of the structure to service all covered bonds according to their payment profile in diverse stress scenarios. The CRA cash flow analysis assumes that the Issuer has defaulted, i.e. all obligations will be met using cash flows from the cover pool assets only. We also assume that no additional assets will be added to the cover pool during the wind-down phase.

This program issues covered bonds with soft- and hard bullet maturity structure. CRA assumes that the maturity extensions of soft bullet covered bonds are reflected on the HTT published by BNP Paribas. Therefore, CRA has taken the relevant extended maturities of the covered bonds into consideration during its cash-flow analysis.

The cash-flow analysis considers, among other factors, asset value haircuts ("asset-sale discount"), and the possible positive yield spread between covered assets and covered bonds ("yield spreads"). To derive the asset-sale discount, CRA assumes, based on secondary market data, a rating level haircut on the asset value. Furthermore, CRA, using available public information (i.e. issuer's annual accounts), has derived estimations for yield spreads (see table 5):

Table 5: Cash-Flow Model assumptions | Source: CRA

Rating level	Asset-Sale Discount	Yield Spread
AAA	66.67%	1.37%
AA+	61.27%	1.39%
AA	57.79%	1.40%
AA-	54.47%	1.42%
A+	51.92%	1.43%
A	49.83%	1.44%
A-	47.10%	1.45%

Rating Scenarios

In our cash flow model rating scenarios have been tested considering several central input parameters, such as:

- Portfolio composition (diversification, concentration, granularity)
- Probability of default of cover assets
- Correlations of cover assets and systematic risk factors
- Recoveries
- Maturity profile of covered bonds and cover assets (ALM)

Within a AAA rating scenario, the cash flow model showed that obligations can be paid fully and in a timely manner. Overall, the cash flow analysis revealed that the portfolio, given all used information as of 31 March 2020, may ensure the repayment of bonds' nominal capital notwithstanding the occurrence of the presented stressed scenarios.

Overcollateralization Break-Even Analysis

CRA also performed a break-even OC analysis taking into considerations the following drivers: ALM, Loss level, Interest rate spreads, foreign currency mismatches and Recoveries. Performing the break-even OC analysis, we took rating-level specific stressed outcomes into account. Based on these analyses, the maximum OC required for each relevant rating level during the whole period has been presented in table 6.

Table 6: Breakeven Analysis | Source: CRA

Rating Level	Break-Even OC
AAA	**22.59%**
AA+	19.80%
AA	16.52%
AA-	13.93%
A+	12.68%
A	12.23%
A-	11.19%

Sensitivity Analysis

CRA also evaluates the sensitivity of the structure and program with respect to important input parameters. In particular, the following factors have been varied:

- Credit quality of cover assets
- Recoveries

The following table presents the rating impact of a decline in recoveries and an increase in the credit risk of single debtor. Starting from the best-case, which is represented by our base case assumptions, the analysis reveals the sensitivity of the rating with respect to recovery rates and credit risk. The worst-case scenario, in which we reduce recoveries by 50% and increase credit risk by 50%, the impact can be seen by a change in the implied rating. Based on the base-case, there is a sensitivity of rating in terms of decreased recovery rates and increased defaults (up to 2 notches). In the worst-case scenario, i.e. a 50% decrease in the base case assumptions leads to a reduction in the base-case rating by 6 notches (see Table 7):

Table 7: Covered Bond Program Sensitivity: Credit Quality und Recovery Rates | Source: CRA

Recovery / Defaults	Base Case	-25%	-50%
Base Case	**AAA**	AAA	AA
+25%	AAA	AA	AA-
+50%	AAA	AA	A-

In general, based on the presented cash flow analysis results, the rating of the cover pool within our covered bond program rating has been set at AAA. Consequently, the secondary rating uplift was set at one (+1) notch.

The ongoing Covid-19 crisis could have a potential impact on the cover pool. It remains to be seen how serious the effects of the lockdown, among other things, will be. Should there be any changes to the cover pool and the rating in the future, we will include them during our monitoring process.

Counterparty Risk

Derivatives

It is our understanding that the Issuer has entered into an Issuer Hedging Agreement with BNP Paribas in the form of currency swap to hedge the risks associated with foreign currency mismatches.

Commingling

Incoming cash flows generated from the cover pool will normally be transferred to the Issuer and will be forwarded to the covered bond holders according to the payment terms and conditions. Should the issuer become bankrupt, there is a risk ("commingling risk") that funds may not be returned and commingled with the insolvency estate of the issuer. This commingling risk is mitigated by the funding of certain cash collateral to an affiliate debt commingling account upon the occurrence of certain events. The credited cash to the affiliate debt commingling account shall be granted as cash collateral in accordance with the relevant terms of the cash collateral agreement, which shall secure the borrower secured liabilities as they become due and payable.

Appendix

Rating History

Event	Rating Date	Publication Date	Result
Initial Rating	08.08.2019	16.08.2019	**AAA / Stable**
Monitoring	24.03.2020	28.03.2020	**AAA / Watch Negative**
Rating Update	30.07.2020	04.08.2020	**AAA / Watch Negative**

Details Cover Pool

Table 8: Characteristics of Cover Pool | Source: BNP Paribas SFH

Characteristics	Value
Cover Pool Volume	EUR 37,466 m.
Covered Bonds Outstanding	EUR 26,564 m.
Substitute Assets	EUR 2,645 m.
Share Derivatives	0.00%
Share Other	100.00%
Substitute Assets breakdown by asset type	
Cash	0.00%
Guaranteed by Supranational/Sovereign agency	0.00%
Central bank	0.00%
Credit institutions	100.00%
Other	0.00%
Substitute Assets breakdown by country	
Issuer country	100.00%
Eurozone	0.00%
Rest European Union	0.00%
European Economic Area	0.00%
Switzerland	0.00%
Australia	0.00%
Brazil	0.00%
Canada	0.00%
Japan	0.00%
Korea	0.00%
New Zealand	0.00%
Singapore	0.00%
US	0.00%
Other	0.00%
Cover Pool Composition	
Mortgages	92.94%
Total Substitute Assets	7.06%
Other / Derivatives	0.00%
Number of Debtors	NA
Distribution by property use	

Residential	100.00%
Commercial	0.00%
Other	0.00%
Distribution by Residential type	
Occupied (main home)	80.89%
Second home	5.46%
Non-owner occupied	13.65%
Agricultural	0.00%
Multi family	0.00%
Other	0.00%
Distribution by Commercial type	
Retail	NA
Office	NA
Hotel	NA
Shopping center	NA
Industry	NA
Land	NA
Other	100.00%
Average asset value (Residential)	EUR 104 k.
Average asset value (Commercial)	NA
Share Non-Performing Loans	0.00%
Share of 10 biggest debtors	0.03%
WA Maturity (months)	160.60
WAL (months)	63.54
Distribution by Country (%)	
France	100.00
Distribution by Region (%)	
Alsace	1.32
Aquitaine	5.42
Auvergne	0.73
Basse Normandie	1.07
Bourgogne	0.98
Bretagne	2.93
Centre	1.96
Champagne Ardennes	0.79
Corse	0.48
DOM - TOM	0.48
Franche-Comté	0.70
Haute Normandie	2.63
Ile-de-France (Paris included)	40.87
Languedoc-Roussillon	3.49
Limousin	0.30
Lorraine	1.66
Midi-Pyrénées	5.01
Nord-Pas-de-Calais	4.41

Pays de la Loire	4.27
Picardie	2.57
Poitou-Charentes	1.32
Provence-Alpes-Côte-d'Azur	8.68
Rhône-Alpes	7.92

Table 9: Participant counterparties | Source: BNP Paribas SFH

Role	Name	Legal Entity Identifier
Issuer	BNP Paribas Home Loan SFH	969500O7DJZNM0F0Z036
Servicer	BNP Paribas SA	R0MUWSFPU8MPRO8K5P83
Account Bank	BNP Paribas SA	R0MUWSFPU8MPRO8K5P83
Sponsor	Not relevant for the issuer and/or CB programme at the present time	Not relevant for the issuer and/or CB programme at the present time

Table 10: Interest rate and Swap counterparties | Source: BNP Paribas SFH

Name	Legal Entity Identifier	Agreement Type
BNP Paribas SA	R0MUWSFPU8MPRO8K5P83	FX

Figure 6: Program currency mismatches | Source: BNP Paribas SFH

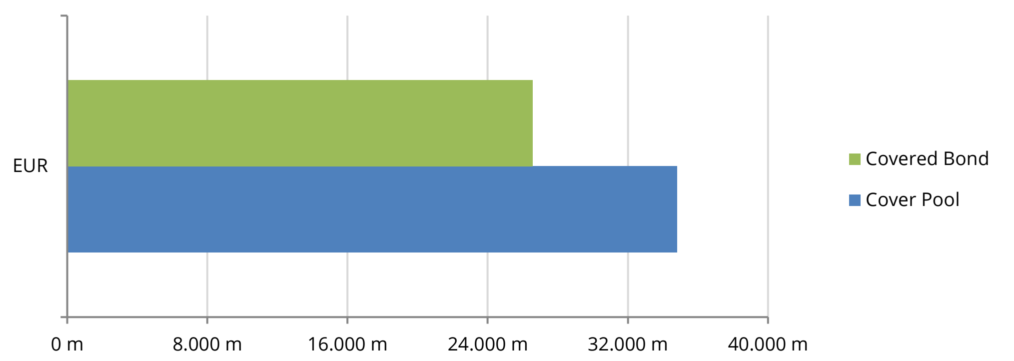
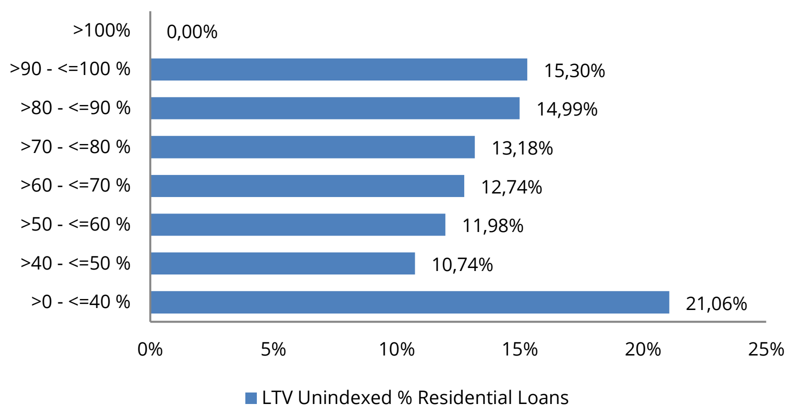


Figure 7: Unindexed LTV breakdown - residential pool | Source: BNP Paribas SFH



Key Source of Information

Documents (Date: 31 March 2020)
Issuer ▪ Audited consolidated annual reports of BNP Paribas SA (Group) 2015-2018 ▪ Rating File 2019 ▪ Miscellaneous Investor Relations Information and Press releases ▪ Peergroup-Data and other data from eValueRate/CRA databank
Covered Bond and Cover Pool ▪ HTT Reporting from BNP Paribas Home Loan SFH as of 31 March 2020 ▪ Base prospectus of the BNP Paribas Home Loan SFH Mortgage Covered Bond program dated 22 June 2020 ▪ Market data Mortgage Cover Bond Program

Regulatory and Legal Disclosures

Creditreform Rating AG was neither commissioned by the rating object nor by any other third parties for the rating. The analysis took place on a voluntary basis by Creditreform Rating AG and is to be described in the regulatory sense as an unsolicited rating. The rating was conducted on the basis of Creditreform Rating´s "Covered Bond Ratings" methodology (v1.0, July 2017) and "Technical Documentation Portfolio Loss Distributions" (v.1.0, July 2018) in conjunction with Creditreform`s basic document "Rating Criteria and Definitions" (v1.3, January 2018). On the subject of ESG (environment, social and governance), Creditreform Rating AG has published the basic document "The Impact of ESG Factors on Credit Ratings" (March 2020).

Unsolicited Credit Rating	
With Rated Entity or Related Third Party Participation	NO
With Access to Internal Documents	NO
With Access to Management	NO

The rating is based on publicly available information and internal evaluation methods for the rated bank and program. The issuer's quantitative analysis is based mainly on the latest annual accounts, interim reports, other information of the bank pertaining to investor relations, and key figures calculated by eValueRate/CRA subject to a peer group analysis of 24 competing institutes. The cover pool's quantitative analysis for the rated Covered Bond Program was based on the "Harmonised Transparency Template" (HTT) published by the BNP Paribas SFH.

Information on the meaning of a rating category, definition of default and sensitivity analysis of relevant key rating assumptions can be found at "Creditreform Rating AG, Rating Criteria and Definitions":

https://www.creditreform-rating.de/en/about-us/regulatory-requirements.html

This rating was carried out by analysts AFM Kamruzzaman (Analyst) and Philip Michaelis (Senior Analyst) both based in Neuss/Germany. On 30 July 2020, the rating was presented to the rating committee by the analysts and adopted in a resolution. The function of Person Approving Credit Ratings (PAC) was performed by Sardor Abdullaev (Analyst).

On 30 July 2020, the rating result was communicated to BNP Paribas SFH, and the preliminary rating report was made available. The Issuer and all relevant parties examined the rating report prior to publication and were given at least one full working day to appeal the rating committee decision and provide additional information. The rating decision was not amended following this examination.

The rating is subject to one-year monitoring from the creation date (see cover sheet). Within this period, the rating can be updated. After one year at the latest, a follow-up is required to maintain the validity of the rating.

In 2011 Creditreform Rating AG was registered within the European Union according to EU Regulation 1060/2009 (CRA-Regulation). Based on the registration Creditreform Rating AG (CRA) is permitted to issue credit ratings within the EU and is bound to comply with the provisions of the CRA-Regulation.

Conflict of Interests

No conflicts of interest were identified during the rating process that might influence the analyses and judgements of the rating analysts involved or any other natural person whose services are placed at the disposal or under the control of Creditreform Rating AG and who are directly involved in credit rating activities or approving credit ratings and rating outlooks.

In the event of provision of ancillary services to the rated entity, CRA will disclose all ancillary services in the credit rating report.

Rules on the Presentation of Credit Ratings and Rating Outlooks

The approval of credit ratings and rating outlooks follows our internal policies and procedures. In line with our policy “Rating Committee,” all credit ratings and rating outlooks are approved by a rating committee based on the principle of unanimity.

To prepare this credit rating, CRA has used following substantially material sources:

1. Transaction structure and participants

2. Transaction documents

3. Issuing documents

4. Other rating relevant documentation

There are no other attributes and limitations of the credit rating or rating outlook other than displayed on the CRA website. Furthermore, CRA considers satisfactory the quality and extent of information available on the rated entity. In regard to the rated entity, Creditreform Rating AG regarded available historical data as sufficient.

Between the disclosure of the credit rating to the rated entity and the public disclosure no amendments were made to the credit rating.

The rating report and/or the press release indicate the principal methodology or version of methodology that was used in determining the rating, with a reference to its comprehensive description

In cases where the credit rating is based on more than one methodology, or where reference only to the principal methodology might cause investors to overlook other important aspects of the credit rating, including any significant adjustments and deviations, Creditreform Rating AG explains this fact in the credit rating and indicates how the different methodologies and other aspects are taken into account in the credit rating. This information is integrated in the credit rating report.

The meaning of each rating category, the definition of default or recovery, and any appropriate risk warning, including a sensitivity analysis of the relevant key rating assumptions, such as mathematical or correlation assumptions, accompanied by worst-case scenario credit ratings as well as best-case scenario credit ratings, are explained.

The date at which the credit rating was released for distribution for the first time and when it was last updated including any rating outlooks, is indicated clearly and prominently in the rating report and/or the press release as a “Rating action”; first release is indicated as “initial rating”, other updates are indicated as an “update”, “upgrade or downgrade”, “not rated”, “confirmed”, “selective default” or “default”.

In the case of a rating outlook, the time horizon is provided during which a change in the credit rating is expected. This information is available within the rating report and/or the press release.

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