Covered Bonds follow-up Rating

Banco Santander Totta S.A.

Mortgage Covered Bond Program

Creditreform Rating

Rating Object	Rating Information	
Banco Santander Totta S.A., Mortgage Covered Bond Program	Rating / Outlook : **AA+ / Stable**	Type: Rating Update (unsolicited)
Type of Issuance : Mortgage Covered Bond under Portuguese law Issuer: Banco Santander Totta S.A.	Rating Date :	13.01.2022
LT Issuer Rating : A- (Banco Santander Totta)	Rating Renewal until :	Withdrawal of the rating
ST Issuer Rating : L2	Maximum validity:	01.01.2050
Outlook Issuer : Stable	Rating Methodology :	CRA „Covered Bond Ratings"

Program Overview

Nominal value	EUR 8.600 m.	WAL maturity covered bonds	4,60 Years
Cover pool value	EUR 9.958 m.	WAL maturity cover pool	26,26 Years
Cover pool asset class	Mortgages	Overcollateralization (nominal/committed)	15,79% / 15,00%
Repayment method	Soft Bullet	Min. overcollateralization	5,26%
Legal framework	Covered Bond Law	Covered bonds coupon type	Fix (100,00%), Floating (0,00%)

Cut-off date Cover Pool information: 30.09.2021

Content

Analysts

Aaron Kamruzzaman
Lead-Analyst
a.kamruzzaman@creditreform-rating.de
+49 2131 109 1948

Qinghang Lin
Analyst
Q.Lin@creditreform-rating.de
+49 2131 109 1938

Neuss, Germany

Rating Action

This follow-up report covers our analysis of the mortgages covered bond program issued under Portuguese law by Banco Santander Totta S.A. („Banco Santander Totta"). The total covered bond issuance at the cut-off date (30.09.2021) had a nominal value of EUR 8.600,00 m, backed by a cover pool with a current value of EUR 9.957,88 m. This corresponds to a nominal overcollateralization of 15,79%. The cover assets include Portuguese mortgages obligations in Portugal.

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 a AA+ rating. The AA+ rating represents a very high level of credit quality and very low investment risk.

Key Rating Findings

+ Covered Bonds are subject to strict legal framework
+ Covered Bond holders have full recourse to the issuer.
+ Covered Bond are backed by the appropriate cover asset class
+ Income situation of issuer in 2021 already nearly at pre-crisis level
- Very high impairments on assets in 2020 for the issuer
- High dependence on currency effects in the issuer's individual business countries

Table1: Overview results

Risk Factor	Result
Issuer rating	A- (rating as of 17.12.2021)
+ Legal and regulatory framework	+4 Notches
+ Liquidity and refinancing risk	+1 Notch
= Rating after 1st uplift	AA+
Cover pool & cash flow analysis	BBB
+ 2nd rating uplift	+/-0 Notch
= Rating covered bond program	**AA+**

Issuer Risk

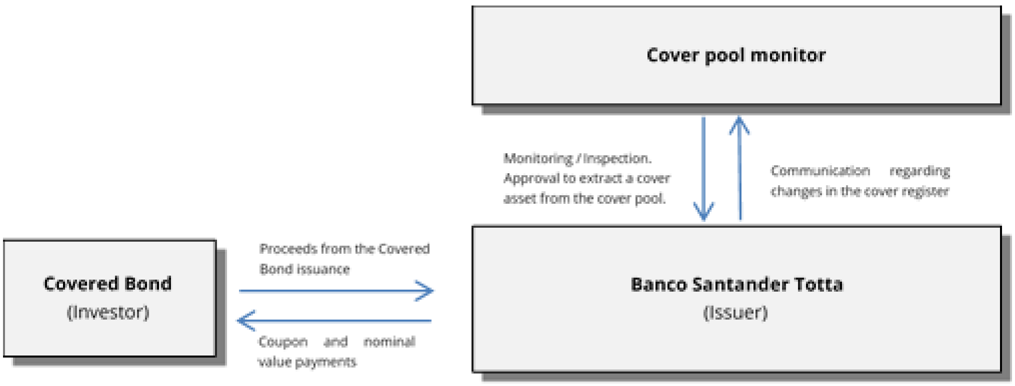
Issuer

Our rating of Banco Santander Totta covered bond program is reflected by our issuer rating opinion of Banco Santander S.A. (Group) due to its structure. CRA has affirmed the unsolicited long-term issuer rating of Banco Santander S.A. (Group) at A- on 17.12.2021. However, CRA raised the outlook from negative to stable. The raise of the outlook and the affirmation of the Credit rating were primarily driven by the unique impact of Corona crisis on Banco Santander's performance. In addition, CRA expects a higher net profit expectation in 2021 and a growth in customer base. Moreover, Banco Santander benefits from its high geographic diversification and the increased digitalization. For a more detailed overview of the issuer rating, please refer to the webpage of Creditreform Rating AG.

Structural Risk

Transaction structure

Figure1: Overview of Covered Bond emission | Source: CRA



Legal and Regulatory Framework

Introduced in 2006, the legal basis for covered bond programs in Portugal is provided by the Decree-Law 59/2006 and a secondary legislation by Central Bank. Under this law either universal banks or specialized credit institutions, i.e. Mortgage Credit Institutions (MCI) are allowed to issue mortgage covered bonds – "Obrigações Hipotecárias" (OH) and public sector covered bonds – "Obrigações sobre o Sector Público" (OP) in Portugal.

The European Commission on November 2019 adopted the legislative package to provide for enhanced harmonisation of the EU covered bond market. The Directive requirements include asset eligibility criteria, liquidity buffer, maturity extensions as well as the role of the cover pool monitor. Each of the Member States should implement the Covered Bond Directive by 8 July 2021 and the national measures shall be applied at the latest from 8 July 2022. However, the transposition of EU Directive into national law is not yet completed in Portugal[1]. It is yet so see if the directive have a potential impact on the legal and regulatory framework currently in force for the issuance of covered bonds once the transposition is completed.

A comprehensive overview of the existing legislation along with previous amendments that govern the "Obrigações Hipotecárias" (OH), can be found in our initial and follow-up rating reports of Banco Santander Totta Mortgage Covered Bonds. The following major provisions describe the status of the existing legislation.

The covered bondholders have direct recourse to the issuer and a preferential claim over the cover pool assets secured by its cover asset class. For mortgage covered bonds the cover assets comprise of mortgage loans confined to EU/ EEA countries, while assets from the US, Canada and Japan are not permitted.

The assets in the cover pool are monitored by an independent cover pool monitor, appointed by the issuer's Board of Directors, and must act on behalf of the covered bond holders' interests. The Board of Directors appoints additionally a bondholders' joint representative to monitor the cover pool who also acts in the interest of the covered bond holders. However, in case of an issuer default, the banking supervision authority guarantees the ongoing management of the cover pool, and no special administrator will be appointed.

In general, we considered the structural framework for covered bonds in Portugal as positive as the Covered Bonds Law provides clear rules on public supervision, insolvency and segregation of cover assets, the priority of creditors' claims in the event of insolvency, the relevant eligibility criteria for cover pool assets, and the rules for its fiduciary management. Due to those reasons we have set a rating uplift of four (+4) notches for the structural and regulatory framework for covered bond programs in Portugal.

Liquidity- and Refinancing Risk

According to the covered bond law, the total nominal value of the outstanding mortgage covered bonds must not exceed 95% of the total value of cover pool assets, which yields a mandatory overcollateralization (OC) of 5.26% for real estate covered bonds.

There is no statutory requirement for liquidity reserves as a further protective mechanism to ensure the servicing of pending capital and interest payments. However, the legislation stipulates that the entire interest payments of the mortgage covered bonds should not be higher than the interest payments by the mortgage loans and other substitution assets.

[1] https://ec.europa.eu/info/publications/covered-bonds-supervision-directive-transposition-status_de

The legal framework does not provide for regular stress tests to be conducted on interest rate- and foreign exchange risks. Nevertheless, a mandatory test to guarantee coverage of both nominal and present value must be performed on monthly basis.

In the event of issuer's bankruptcy, the legal framework provides that the special administrator may do all necessary and convenient actions (e.g. sell assets of the cover pool.) to ensure timely nominal and interest payments.

In general, the regulatory requirements for liquidity and risk management are relatively weak as sufficient structural safeguards are not established due to the absence of compulsory liquidity buffer and no obligation to conduct stress tests for interest rate and currency risks. On the other hand, refinancing risks, might be partially reduced due to the soft bullet repayment structure, however, other arising risks can only be cushioned by sufficiently high OC or other liquid funds. Nevertheless, we assess the overall legal provisions on liquidity management for covered bond programs under the Portuguese cover bond law and set a rating uplift of only one (+1) notch.

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 Portuguese legal framework defines clear rules to mitigate risks in public supervision, insolvency and segregation of cover assets, the priority of creditors' claims in the event of insolvency. However, the Portuguese legal framework does not have liquidity buffer and compulsory stress test obligation. On the other hand, the soft bullet structure mitigates partially refinancing risk, while relatively high OC and liquidity fund cushions the arising risk. 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 30.09.2021, the pool of cover assets consisted of 175.927 debt receivables, of which 100,00% are domiciled in Portugal. The total cover pool volume amounted to EUR 9.957,88 m in residential (100,00%), commercial (0,00%) and others (0,00%) loans.

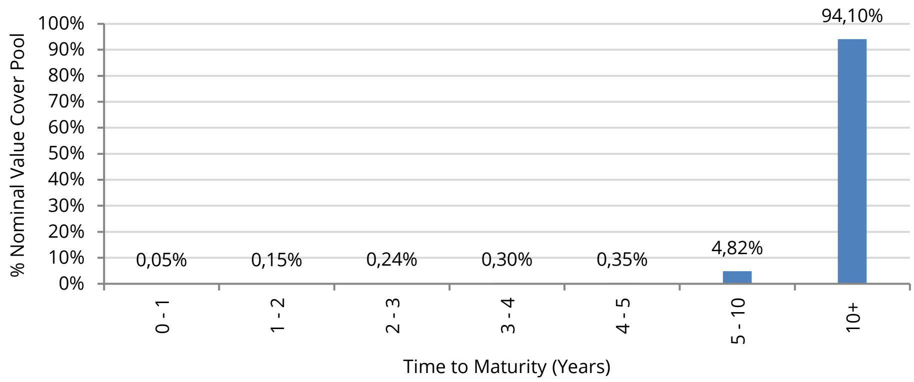
The residential cover pool consists of 175.927 mortgage loans having an Unindexed weighted average LTV of 54,15%. The cover pool has 100% residential mortgage loans. The ten largest debtors of the portfolio total to 0,18%. Table 2 displays additional characteristics of the cover pool:

Table 2: Cover pool characteristics | Source: Banco Santander Totta

Characteristics	Value
Cover assets	EUR 9.958 m.
Covered bonds outstanding	EUR 8.600 m.
Substitute assets	EUR 0,00 m.
Cover pool composition	
Mortgages	100,00%
Substitute assets	0,00%
Other / Derivative	0,00%
Number of debtors	NR
Mortgages Composition	
Residential	100,00%
Commercial	0,00%
Other	0,00%
Average asset value (Residential)	EUR 56,60 k.
Average asset value (Commercial)	0,0%
Non-performing loans	0,0%
10 biggest debtors	0,18%
WA seasoning	104,34 Months
WA maturity cover pool (WAL)	26,26 Years
WA maturity covered bonds (WAL)	4,60 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 30.09.2021 (see figure 2):

Figure 2: Distribution by remaining time to maturity I Source: Banco Santander Totta



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: Banco Santander Totta

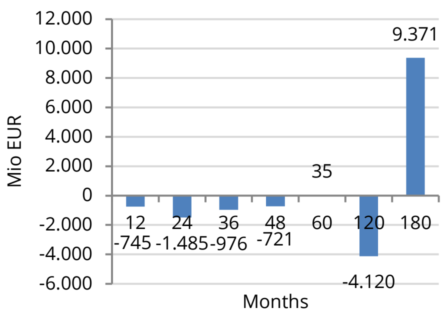
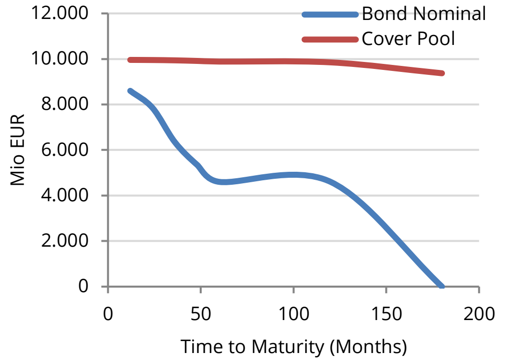


Figure 4: Amortization profile | Source: Banco Santander Totta



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

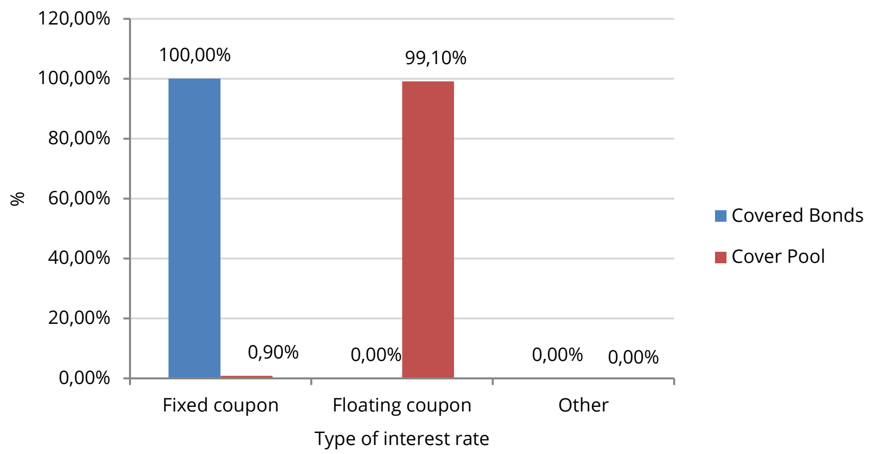
In order to reduce the exposure to the interest rate and currency risks, derivative contracts can be used to hedge these risks. Furthermore, the Portuguese Covered Bond Law stipulates on a monthly basis a coverage testing to anticipate interest rate discrepancies. Currency risk, on the other hand, is also limited for this program as all cover pool assets and cover bonds are denominated in Euros. CRA assumes that the interest rate mismatches are hedged in the form of swap agreements, therefore, CRA did not apply interest rate stresses on the cash flows.

Table 3: Program distribution by currency | Source: Banco Santander Totta

Currency	Volume	Share (%)
Cover Pool		
EUR	9.958 m.	100,00%
Covered Bond		
EUR	8.600 m.	100,00%

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

Figure 5: Type of interest rate | Source: Banco Santander Totta



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 Banco Santander Totta, it has been assumed an expected default rate of 0,027% 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 (%)
A	5,71%	82,12%	1,02%
A-	5,38%	82,98%	0,92%
BBB+	5,00%	83,99%	0,80%
BBB	**4,60%**	**85,12%**	**0,68%**
BBB-	4,17%	86,51%	0,56%
BB+	3,54%	88,80%	0,40%
BB	2,98%	91,33%	0,26%

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 bullet maturity structure, i.e. a 12 months maturity extension upon the final legal maturity. This characteristic of the covered bonds has been taken into account during our 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
A	54,21%	2,25%
A-	51,37%	2,27%
BBB+	48,36%	2,29%
BBB	**45,43%**	**2,31%**
BBB-	42,36%	2,33%
BB+	39,03%	2,35%
BB	35,37%	2,37%

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 BBB 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 30.09.2021, 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
A	19,91%
A-	18,15%
BBB+	16,27%
BBB	**14,44%**
BBB-	12,51%
BB+	10,39%
BB	8,09%

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 debtors. 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 reduction in the base-case rating by 1 notches to BBB- (see Table 7):

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

Recovery / Defaults	Base Case	-25%	-50%
Base Case	**BBB**	BBB	BBB-
+25%	BBB	BBB-	BBB-
+50%	BBB	BBB-	BBB-

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 BBB. Consequently, the secondary rating uplift was set at zero (0) notch.

However, it is worth mentioning that, 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 issuer rating in the future, we will include them during our monitoring process.

Counterparty Risk

Derivatives

Based on the available information, CRA assumes that the issuer has entered into partial derivative agreements in the form of interest rate swaps.

Commingling

In the event of issuer's bankruptcy, in order to avoid commingling of funds, the Portuguese covered bond law stipulates that that the cover assets should be isolated from the general bankruptcy estate (insolvency-free assets) and a special credit institution nominated by Bank of Portugal will be appointed to administer the cover pool. Under that mandate the cover pool administrator will have first priority on the up-coming cash flows from the cover assets. These cash flows in turn should be used to cover interest and principal payments of the covered bond holders in event of the Issuer's insolvency.

Appendix

Rating History

Event	Rating Date	Publication Date	Result
Initial Rating	18.02.2019	27.02.2019	AAA / Stable
Rating Update	26.02.2020	28.02.2020	AAA / Stable
Monitoring	24.03.2020	28.03.2020	AAA/ Watch negative
Rating Update	16.02.2021	22.02.2021	AA+ / Negative
Monitoring	05.07.2021	06.07.2021	AA+ / Watch UNW
Rating Update	13.01.2022	20.01.2022	AA+ / Stable

Details Cover Pool

Table 8: Characteristics of Cover Pool | Source: Banco Santander Totta

Characteristics	Value
Cover Pool Volume	EUR 9.958 m
Covered Bonds Outstanding	EUR 8.600 m
Substitute Assets	EUR 0 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	0,00%
Other	0,00%
Substitute Assets breakdown by country	
Issuer country	0,00%
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	100,00%
Total Substitute Assets	0,00%
Other / Derivatives	0,00%
Number of Debtors	NR
Distribution by property use	
Residential	100,00%
Commercial	0,00%
Other	0,00%
Distribution by Residential type	
Occupied (main home)	93,15%
Second home	6,85%
Non-owner occupied	0,00%
Agricultural	0,00%
Multi family	0,00%
Other	0,00%
Distribution by Commercial type	
Retail	0,00%
Office	0,00%
Hotel	0,00%
Shopping center	0,00%
Industry	0,00%
Land	0,00%
Other	100,00%
Average asset value (Residential)	EUR 57 k.
Average asset value (Commercial)	NR
Share Non-Performing Loans	0,00%
Share of 10 biggest debtors	0,18%
WA Maturity (months)	319,46
WAL (months)	315,08
Distribution by Country (%)	
Portugal	100,00
Distribution by Region (%)	
North	31,40
Center	17,54
Lisbon	36,96

Alentejo	4,77
Algarve	6,03
Madeira	2,19
Azores	1,11

Table 9: Participant counterparties | Source: Banco Santander Totta

Role	Name	Legal Entity Identifier
Issuer	Banco Santander Totta S.A.	549300URJH9VSI58CS32
Servicer	Banco Santander Totta, S.A.	549300URJH9VSI58CS32
Account Bank	Banco Santander Totta, S.A.	549300URJH9VSI58CS32

Table 10: Interest rate and Swap counterparties | Source: Banco Santander Totta

Name	Legal Entity Identifier	Agreement Type
Banco Santander Totta, S.A.	5493006QMFDDMYWIAM13	IR

Figure 6: Arrears Distribution | Source: Banco Santander Totta

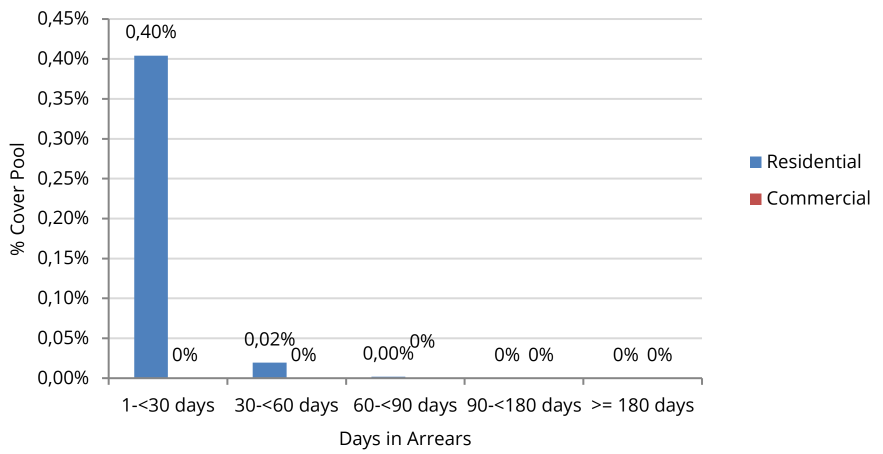


Figure 7: Program currency mismatches | Source: Banco Santander Totta

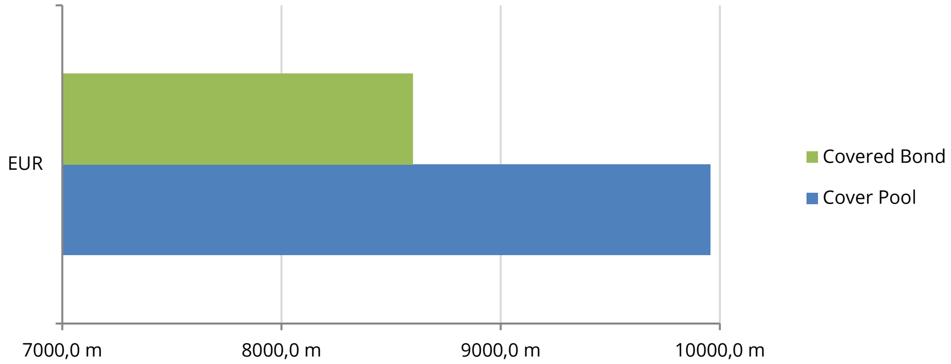
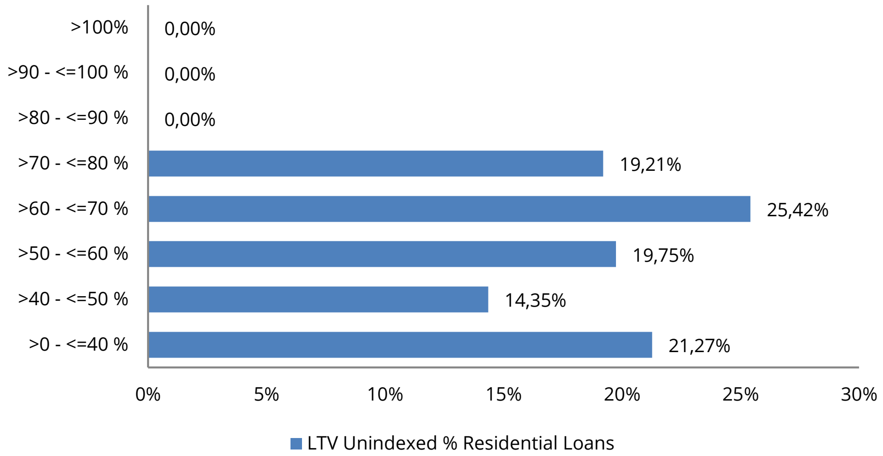


Figure 8: Unindexed LTV breakdown - residential pool | Source: Banco Santander Totta



Key Source of Information

Documents (Date: 30.09.2021)
Issuer ▪ Audited consolidated annual reports of Banco Santander SA (Group) 2017-2020 ▪ Rating Update as of 17.12.2021 ▪ Miscellaneous Investor Relations Information and Press releases ▪ Peergroup-Data and other data from eValueRate/CRA databank
Covered Bond and Cover Pool ▪ HTT Reporting from Banco Santander Totta as of 30.09.2021 ▪ Base prospectus of Mortgage Covered Bond Program dated 20.05.2021 ▪ Market data Mortgage Covered 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 CRA/ eValueRate database. The cover pool's quantitative analysis for the rated Covered Bond Program was based on the "Harmonised Transparency Template" (HTT) published by the Banco Santander Totta.

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 Aaron Kamruzzaman (Analyst) und Qinghang Lin (Analyst) both based in Neuss/Germany. On 13.01.2022, 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 Christian Konieczny (Senior Analyst).

On 13.01.2022, the rating result was communicated to Banco Santander Totta, 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.

Endorsement

Creditreform Rating did not endorse the rating according Article 4 (3), 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 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 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 Press Release.

In accordance to Article 11 (2) EU-Regulation (EC) No 1060/2009 registered or certified credit rating agency shall make available in a central repository established by ESMA information on its historical performance data, including the ratings transition frequency, and information about credit ratings issued in the past and on their changes. Requested data are available at the ESMA website: https://cerep.esma.europa.eu/cerep-web/statistics/defaults.xhtml.

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Contacts

Creditreform Rating AG

Europadamm 2-6
D - 41460 Neuss

Fon +49 (0) 2131 / 109-626
Fax +49 (0) 2131 / 109-627
E-Mail info@creditreform-rating.de
Internet www.creditreform-rating.de

CEO:
Dr. Michael Munsch
Chairman of the board:
Michael Bruns

HRB 10522, Amtsgericht Neuss