Creditreform Covered Bond Rating

Banco Santander Totta, S.A.
Mortgage Covered Bond Program

Creditreform Rating
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Rating Object	Rating Information
Banco Santander Totta S.A., Mortgage Covered Bond Program Type of Issuance : Mortgage Covered Bond under Portuguese law Issuer : Banco Santander Totta S.A. LT Issuer Rating: A (Banco Santander Totta S.A.) ST Issuer Rating: L2 Outlook Issuer: Stable	Rating / Outlook : **AAA / Stable** Type: Initial Rating (unsolicited) Rating Date : 18.02.2019 Rating Renewal : Withdrawal of the rating Rating Methodology : CRA „Covered Bond Ratings"

Program Overview

Nominal value	EUR 7.700 m.	WAL maturity covered bonds	5,22 (Years)
Cover pool value	EUR 8.937 m.	WAL maturity cover pool	25,82 (Years)
Cover pool asset class	Mortgages	Overcollateralization (nominal/committed)	16,06%/ 11,00%
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: 31.12.2018.

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Summary

This rating report covers our analysis of the mortgages covered bond ("Obrigações Hipotecárias") program issued under Portuguese Covered Bond Law by Banco Santander Totta („Banco Santander Totta S.A."). The total covered bond issuance at the cut-off date (31.12.2018) had a nominal value of EUR 7.700,00 m, backed by a cover pool with a current value of EUR 8.936,66 m. This corresponds to a nominal overcollateralization of 16,06%. The cover assets mainly include Portuguese 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") has assigned the covered bond program an AAA rating. 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 requirements
- \+ Covered bonds are backed by the appropriate cover asset class
- \+ Covered bond holders have recourse to the issuer
- \- No short term liquidity buffer.

Table1: Overview results

Risk Factor	Result
Issuer rating	A (rating as of 15.08.2018)
+ Legal and regulatory framework	+4 Notches
+ Liquidity and refinancing risk	+1 Notch
= Rating after 1^{st} uplift	AAA
Cover pool & cash flow analysis	BB-
+ 2^{nd} rating uplift	+/-0
= Rating covered bond program	**AAA**

Issuer Risk

Issuer

Our rating of Banco Santander Totta S.A. is reflected by our rating opinion of Banco Santander S.A. (Group) due to its group structure. Therefore we refer to our rating of Banco Santander S.A. (Group).

Founded in 1857, the Banco Santander S.A. is managed by the Botín family in the fourth generation. The bank developed through a series of mergers and acquisitions into a globally operating and multinational financial group, beginning in the 1990s. After the merger with Banco Central Hispano in 1990, Banco Santander became the largest universal bank in Spain. Moreover, the bank is the largest bank in the eurozone in terms of its market capitalization of EUR 88.410 million in 2017. As Banco Santander is one of the global systematically important banks (G-SIB), the bank must comply with additional regulatory requirements. The bank's headquarter is in Madrid.

Santander's business model is based on geographic diversification and focuses on commercial banking, which accounted for approximately 91% of the bank's revenue in 2017. The bank operates in ten core markets with a distribution between mature markets and developing markets. In detail, these are the countries of Argentina, Brazil, Chile, Germany, Mexico, Poland, Portugal, Spain, the United Kingdom and USA, each with a centralized management structure. More than 202,251 people work for the bank Worldwide and it has approximately 133 million customers as of 2017.

On June 7th 2017, the Single Resolution Board (SRB) announced the acquisition of Banco Popular through Banco Santander for EUR 1. Banco Popular was considered failing due to a liquidity crisis. Therefore Banco Santander increased its capital by EUR 7 billion in July 2017.

In 2017 Santander can look back on a year of favorable performance. Despite the low-interest environment in Europe, Santander was able to noticeably improve its net interest income through its regional diversification of business activities in the different core markets and to considerably increase its income from net fees and commissions. The bank was generally able to post stable profits in a multi-year comparison. Due to the acquisition and integration of Banco Popular, the NPL-ratio and the total risk-weighted assets increased, which had a negative impact on the bank's asset quality; however, the geographic diversification of Santander's business model has a positive impact on the quality of its assets. Furthermore, the gap between Santander's capital ratios and those of the peer group has increased in recent years; retaining a larger share of profits could close this gap. Due to its high systemic relevance and worldwide networking, the liquidity situation was guaranteed all times.

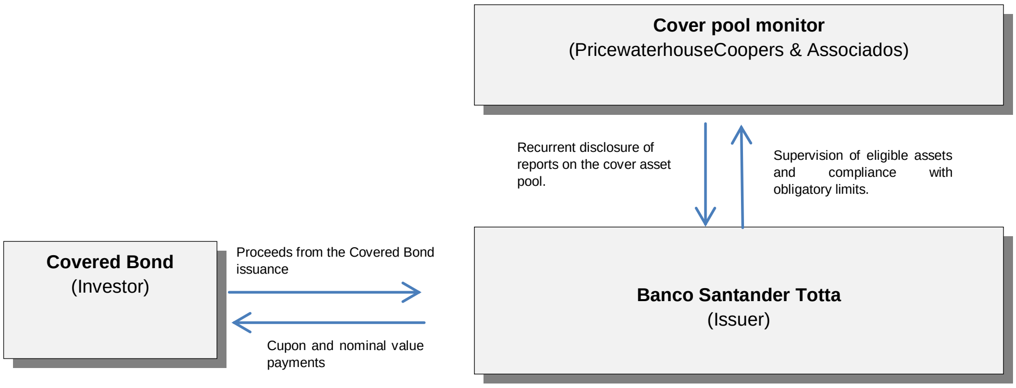
Structural Risk

Transaction structure

Table 2: Overview of all transaction's parties | Source: CRA

Role	Name
Issuer	Banco Santander Totta, S.A., Portugal
Cover pool monitor	PricewaterhouseCoopers & Associados, Sociedad de Revisores Oficiaias de Contas, Ltd
Cover pool administrator	Bank of Portugal or a nominated Credit Institution

Figure1: Overview of Covered Bond emission | Source: CRA



Legal and Regulatory Framework

Introduced in 2006, the legal basis for covered bond issuances in Portugal is provided by the Decree-Law 59/2006 of 03.20.2006. It defines the legal framework for mortgage covered bonds – “Obrigações Hipotecárias” (OH) – and public sector covered bonds – “Obrigações sobre o Sector Público” (OP). In addition, the Bank of Portugal has adopted a secondary legislation – Notices and Regulatory Instruments of the Central Bank (Avisos e Instruções) which supplements Decree-law no. 59/2006. In particular it deals with aspects such as the segregation of the cover pool from the issuer’s insolvency estate in case of issuer default, the adherence to asset and liability matching, or mortgage valuation techniques.

Credit institutions that are licensed to provide loans are allowed to issue mortgage covered bonds and public sector covered bonds. Such credit institutions should be either universal banks or specialized credit institutions, i.e. Mortgage Credit Institutions (MCI). The Bank of Portugal and the Portuguese Securities Commission are in charge of the banking and capital markets supervision. Besides the establishment of the necessary provisions for MCI’s, the Bank of Portugal is responsible for the regulatory monitoring of covered bond programs and their issuers off-site and on-site. Among other functions, the Bank of Portugal oversees the issuers' asset liability management and is allowed to establish further provisions towards the issuers' asset liability. In case of any issuer’s non-compliance, the Bank of Portugal can decree a penalty or even restrict the issuer from issuing covered bonds in the future. Moreover, she scrutinizes the compliance with relevant eligibility criteria and their monthly documentation. Finally, in case of issuer default, the Bank of Portugal has to induce the transfer of the cover assets to another credit institution. Thus, the duties and powers of the supervisory authority are determined, which is aligned with EBA Best Practices.

With regard to the Article 129 of the regulation 575/2013 (CRR) and the criteria of Article 52 (4) of the UCITS Directive, the Portuguese legal framework meets these criteria. Hence, covered bonds are eligible in repo transactions with the national central bank. Concerning the BRRD implementation, which provides resolution authorities with various resolution tools, Portugal has transposed the directive – including the bail-in tool – into national law in August 2015. This framework should ensure that the corresponding resolution authority exempts covered bonds from bailing-in and write downs in the event of an issuer's insolvency.

In December 2015, the Bank of Portugal delegated five bonds of Novo Banco to Banco Espirito Santo (BES) – a bad bank that was established after the saving of the distressed BES group – and thus declared the bonds worthless. After the assignment of the bonds to BES, the cash price declined drastically, while the capital position of Novo Banco considerably increased. Covered bonds were exempted from all this.

Bankruptcy Remoteness and Asset Segregation

The legal framework ensures the identification and segregation of the cover assets, i.e. the cover assets assigned to the issues of covered bonds are directly owned and kept by the issuer in segregated accounts and established as a separate legal estate. The issuing institutions must record all assets and derivative contracts which are part of the cover pool, into the cover register in order to identify them as separate legal estate, and to split them off from the issuer's remaining assets in case of issuer default.

If the issuing institution is a universal bank, the cover assets remain on the bank's balance sheet. On the other hand, if the issuer is a MCI and a fully-owned subsidiary of the originator, the asset originator delegates the cover assets to the MCI, while the assets and liabilities are consolidated on the originator's financial statements. In contrast, if the MCI has multiple owners, the cover assets may or may not be consolidated on the originator's balance sheet. The issuer receives the revenues from the cover assets, which in turn ensure the payments of the covered bonds. Although no direct linkage between the cover assets and the corresponding covered bond programs exists, a legal provision relates the cover pool to principal and interest payment, which makes the covered bonds direct, unconditional liabilities of the issuing institution. In case of issuer default, the cover assets will be segregated from the bankruptcy estate of the issuer, which is fully in line with EBA's best practice regarding the segregation of cover assets. Cover assets constitute a discrete legal estate and will be administered by a credit institution nominated by the Bank of Portugal in favour of covered bond holders.

In addition, in the case of an issuer default, no automatic acceleration of the covered bond will take place. Covered bonds will continue to exist and they will be reimbursed at the time of their original contractual maturity. Nevertheless, covered bond holders can call the covered bonds by means of a majority of 2/3 in terms of the outstanding covered bond amount. Portugal mainly issues soft-bullet covered bonds, i.e. an extension period will grant additional time to pay back principal and interest payments of covered bonds. Nevertheless, recently Portugal also issues conditional pass-through covered bonds.

Covered bond holders enjoy of a preferential status i.e. they have priority over any other creditors' receivables regarding their principal and interest claims. In the case that cover assets are insufficient to repay covered bond holders, they allowed to file a claim against the general insolvency estate of the issuer and can make use of the dual recourse, while they rank *pari passu* to other unsecured creditors.

Moreover, with regard to bankruptcy remoteness, the Portuguese legal framework establishes a particular regime applicable to the asset originator's insolvency, which replaces general bankruptcy law and implements insolvency remoteness proceedings that should protect the covered bond holders' claims. Nevertheless, due to the lack of regulatory requisites for the issuer, which will be in turn on charge of further proceedings of the covered bond program and should regulate its proper functioning upon the issuer's bankruptcy, Portugal is merely partially aligned with EBA's recommendation

Cover Pool Monitor

The assets in the cover pool are monitored by an independent auditor, a so call "cover pool monitor". The cover pool monitor should be appointed by the issuer's Board Of Directors and must act on behalf of the covered bond holders' interests, while he or she has to supervise the accuracy of the transactions and of the soundness of the cover assets, and to examine whether the legal and regulatory requirements are maintained (e.g. minimum mandatory overcollateralization requirements, exposure to market risk and liquidity risk, etc.). Nevertheless, the framework does not provide any specific regulations on the cover pool monitor's liability. Thus, merely general rules on civil and contractual accountability prevail and the cover pool monitor will only be held responsible if he or she does not adhere to such legislation. On top of that, the Board of Directors appoints additionally a bondholders' joint representative who is accountable to all mortgage covered bond or public sector covered bond issues. He or she has to monitor the cover pool and act in the interest of the covered bond holders.

Special Administrator

In case of an issuer default or any other crisis with respect to covered bonds, the ongoing management of the cover pool is guaranteed by the banking supervision authority. No special administrator will be appointed. However, in the event that the issuer admits its bankruptcy, it has to recommend a credit institution to the Bank of Portugal that will be nominated in order to administer the cover pool. In case of a revocation of the issuer's licence to issue covered bonds, the Bank of Portugal should nominate a credit institution that will manage the cover pool. Portugal fully complies with EBA's best practice regarding the administration of the covered bond program post the issuer's insolvency or resolution.

Eligibility Criteria

Eligible cover assets are mainly first rank mortgage loans. Second rank mortgage loans can be also incorporated provided that the first rank mortgage loan of the same property was included beforehand in the cover pool. Primary assets classes in the cover pool are residential mortgages, commercial mortgages and public sector loans. The legal framework stipulates that cover pools have to be segregated into mortgage and public sector cover pools, i.e. mixed pools are not allowed. However, there are no regulatory limits that restrict the mixture and composition of residential and commercial mortgages in one cover pool

The geographical scope of eligible mortgage loans and public assets is limited to the EU / EEA countries, while assets from the US, Canada and Japan are not permitted.

Under the regulatory frameworks, derivatives are only permitted if they are used to hedge risks. The early termination of derivative contracts in the cover pool in the event of a bankruptcy of the issuer is not permitted under supervisory law, which corresponds to the proposals of the EBA Best Practices.

Substitution assets are allowed up to a limit of 20%, while they can either be deposits in cash, government bonds or other eligible bonds with the Bank of Portugal, or deposits in other credit institutions with a rating not less than A-, or other low risk and high quality assets. The Bank of Portugal instructs that merely credit institutions with credit quality step 1 can be considered, while aggregate risk positions may not pass over the limit of 15% of the aggregate nominal amount of outstanding mortgage covered bonds or public sector covered bonds in line with Article 129(1) CRR.

With respect to LTV limits, the legal framework sets a maximum LTV ratio of 80% for residential mortgage loans or 60% for commercial mortgage loans. These limits represent the caps that make an entire loan ineligible for the cover pool in case of exceedance. In the event that these limits are violated, the issuer has to eliminate the loan and assign other eligible loans.

Systemic Relevance and External Support

According to the ECBC[1], the total amount of covered bonds outstanding has remained stable at around EUR 33bn to EUR 36bn over the last past five years. In 2017, total outstanding covered bonds amounted to EUR 36,1bn, with EUR 35,5bn secured by mortgages and EUR 0,6bn by public sector loans. Over the years, the mortgage covered bonds have had a major roll over the public sector ones. Mortgage covered bond issuance contracted from 37bn in 2013 to 33bn in 2016. Public sector covered bond issuances fell considerably from 1,2bn to 0,5bn at the same period.

With a market share of around 20% in terms of the entire mortgage segment in Portugal, Bank Santander Totta is an important local issuer. Moreover, with regard to its parent company, Banco Santander, is one of the largest financial institutions in Spain and in Europe. We do not see increased likelihood of external support for the government, both for the covered bond program of

[1] EMF-ECBC (2018), ECBC: European Covered Bond Fact Book 2018, EMF-ECBC

Banco Santander Totta and for the issuer itself, in our qualitative analysis, however, by its parent company Banco Santander.

Summary Structural Risk

In general, 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, which provide adequate structural support for the covered bond programs in Portugal.

We considered the structural framework in Portugal under the legal framework as positive. Furthermore, we contemplate the importance of Banco Santander Totta in the Portuguese covered bond market in our analysis. Due to those reasons we have set a rating uplift of four (+4) notches

Liquidity- and Refinancing Risk

Minimum Overcollateralization

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. This yields a mandatory overcollateralization of 5.26% for real estate covered bonds. Portugal seems to be fully aligned with EBA's best practice of coverage principles and overcollateralization.

Short-term Liquidity Coverage

The "natural matching" is the main tool used to mitigate liquidity risk. Besides that, to assess the liquidity requirements the issuer must elaborate a liquidity map considering liquidity mismatches up to one month, one to three months, three to six months and six to twelve months and report it to the Portuguese central bank on a quarterly basis. Furthermore, under the current legal frameworks, issuers are not required to hold a time-based liquidity buffer to cover outflows from liabilities (interest and principal) or derivative transactions over a certain future period of time. This is partially in line with EBA Best Practices and has been considered in the CRA legal and regulatory framework assessment.

Stress Tests

There is no regulatory obligation that requires issuers to perform specific stress tests. Nevertheless, a mandatory test to guarantee coverage of both nominal and present value must be performed on a monthly basis. Overall on that respect, the Portuguese framework do not fulfil EBA's guidelines.

Asset-Liability Mismatch

An asset-liability mismatch ("ALM") arises in the case of different maturities between cover assets and covered bonds. Current legislation in Portugal uses the "natural matching" as the essential approach to reduce ALM risks. On the other hand, 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. Overall, the net present value of the liabilities of mortgage covered bonds or public sector covered bonds must not exceed the net present value of the assets assigned to the bonds. To guarantee coverage, both nominal and present value coverage tests as well as static and dynamic stress tests are conducted on a monthly basis

Repayment Method

The present covered bond program issues covered bonds with soft bullet maturity, i.e. an extension period will grant additional time to pay back principal and interest payments of covered bonds. Maturity mismatches between cover assets and liabilities arising from maturing covered bonds thus could be eventually mitigated by a potential maturity prolongation from up to 12 months.

Refinancing costs

In the event of a bankruptcy of the issuer, the legal frameworks provide 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. CRA's analysis assumes that refinancing gaps due to ALM will be closed by selling assets from the cover pool. In doing so, we take into account related costs in the form of a discount to the nominal value. The quantification of this discount takes place following an analysis of relevant market data and enters into the cash flow analysis.

Other liquidity risks

Derivatives can be an additional measure to hedge interest rate and currency risks. However, the legal framework does not provide for regular stress tests to be conducted on interest rate- and foreign exchange risks.

Summary Liquidity- and Refinancing Risks

In comparison to other jurisdictions, the regulatory requirements for liquidity and risk management are relatively weak and barely in line with the requirements of EBA Best Practices. Overall, sufficient structural safeguards are not established due to the absence of compulsory liquidity buffers 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 risk can only be cushioned by sufficiently high overcollateralization, short-term cash availability, or other liquid funds to bridge the asset-liability mismatches in the portfolio.

Nevertheless, we assess the overall legal provisions on liquidity management for covered bonds programs under the Cover Bond Law and set a rating uplift of only one (+1) notch.

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 31.12.2018, the pool of cover assets consisted of 170.349,00 debt receivables, of which 100% are domiciled in Portugal. The total cover pool volume amounted to EUR 8.936,66 m in residential (100,00%), commercial (0,00%) and others (0,00%). The ten largest debtors of the portfolio total 0,16%. Table 3 displays additional characteristics of the cover pool:

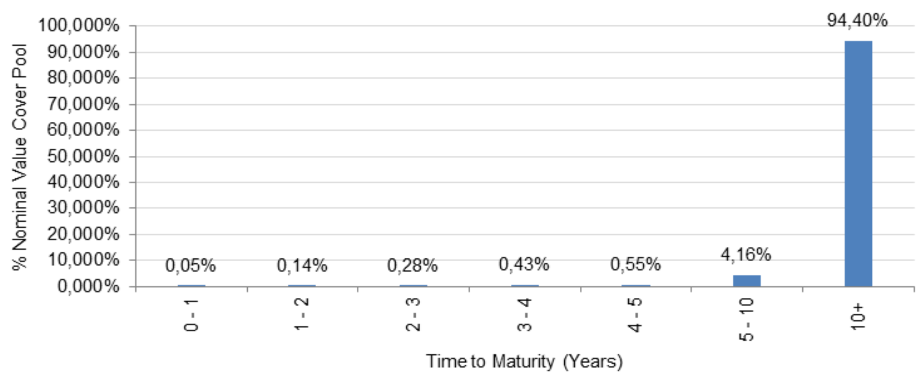
Table 3: Cover pool characteristics | Source: Banco Santander Totta S.A.

Characteristics	Value
Cover assets	EUR 8.937 m.
Covered bonds outstanding	EUR 7.700 m.
Substitute assets	EUR 0,00 m.
Cover pool composition	
Mortgages	100,00%
Substitute assets	0,00%
Other / Derivative	0,00%
Number of debtors	N/A
Mortgages Composition	
Residential	100,00%

Commercial	0,00%
Other	0,00%
Average asset value (Residential)	EUR 52,46 k.
Average asset value (Commercial)	EUR 0,00 k.
Non-performing loans	0,0%
10 biggest debtors	0,16%
WA seasoning	104,62 Months
WA maturity cover pool (WAL)	25,82 Years
WA maturity covered bonds (WAL)	5,22 Years

We have listed an extended view of the composition of the cover pool in the appendix section "Cover pool details", with, for example, a detailed regional distribution. The following chart displays the maturity profile of the cover assets at the cut-off date 31.12.2018 (see figure 2):

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



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 S.A.

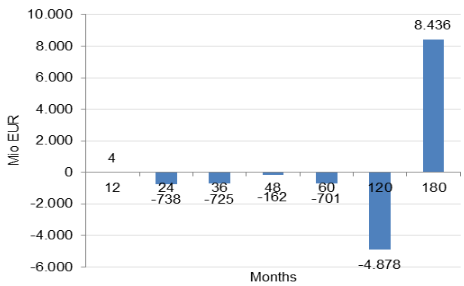
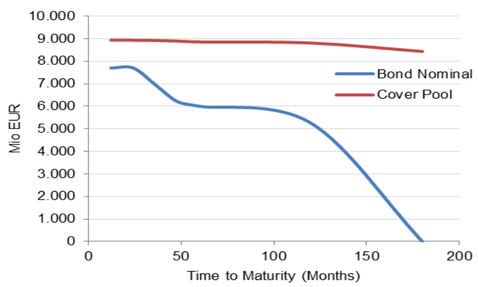


Figure 4: Amortization profile | Source: Banco Santander Totta S.A.



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

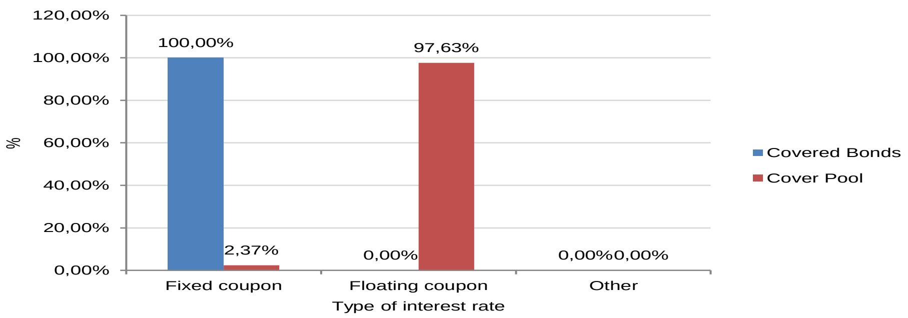
In order to reduce the exposure to the interest rate and currency risks, derivative contracts can be used to hedge these risks. Furthermore, the Portuguese Covered Bond Law stipulates on a monthly basis a coverage testing to anticipate interest rate discrepancies. Currency risk, regardless that, is limited for this program as 100,00% of the cover pool assets and 100,00% of the cover bonds are denominated in euro. In spite of that, 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 and currency mismatches was negligible for this program, which has been presented in our 'Overcollateralization Break-Even Analysis' segment.

Table 4: Program distribution by currency | Source: Banco Santander Totta S.A.

Currency	Volume	Share (%)
Cover Pool		
EUR	8.937 Mio	100,00%
Covered Bond		
EUR	7.700 Mio	100,00%

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

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



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 historical issuer's NPL ratio to derivate a conservative default rate proxy for the approximation through the LHP distribution. For the Banco Santander Totta SA it has been assumed an expected default rate of 0,66% for the LHP. Furthermore CRA has considered a 15,00% correlation to define the LHP distribution. Table 5 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 5)

Table 5: Cover Pool Base case assumptions | Source: CRA

Rating	Default Rate (%)	Recoveries (%)	Expected Loss (%)
BB+	13,66%	89,53%	1,43%
BB	12,02%	91,76%	0,99%
BB-	10,27%	94,15%	0,60%
B+	8,92%	96,31%	0,33%

B	7,72%	97,78%	0,17%
B-	6,28%	99,71%	0,05%

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.

Asset-Sale Discount

In our model, short-term liquidity needs and liquidity needs due to asset-liability mismatches will be met with a sale of cover assets available for monetization. Based on secondary market data, CRA assumes a rating-level haircut on the asset value („Asset-Sale Discount“) which represents additional costs of disposal and market risks during the sale of cover assets. (see Table 6).

Yield Spread

Since cover assets often have a positive yield spread against the covered bonds issued, CRA uses available public information (i.e. issuers´ annual accounts) to size this assumed spread („Yield Spread“) (see table 6):

Table 6: Cash-Flow Model assumptions | Source: CRA

Rating level	Asset-Sale Discount	Yield Spread
BB+	36,74%	1,08%
BB	33,12%	1,11%
BB-	29,38%	1,13%
B+	25,77%	1,16%
B	22,02%	1,19%
B-	14,65%	1,24%

Rating Scenarios

Scenarios that have been tested in our cash flow model rely on the variation of 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 **BB+** rating scenario, the cash flow model showed that obligations can be paid fully and in a timely manner. In total, the cash flow analysis revealed that the portfolio, given all information available as of 31.12.2018, could be sufficient to repay bond nominal capital notwithstanding the occurrence of extraordinary events. On this basis, the rating of the cover pool within our covered bond program rating has been set at BB+.

Overcollateralization Break-Even Analysis

CRA also performed a break-even OC analysis. Such OC levels should bear the corresponding losses for a given rating scenario. Main drivers of the analysis are:

- ALM
- Loss level
- Interest rate spreads
- Foreign currency mismatches
- 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 7.

Table 7: Breakeven Analysis | Source: CRA

Rating Level	Break-Even OC
BB+	22,33%
BB	19,12%
BB-	15,90%
B+	12,91%
B	9,92%
B-	4,22%

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 change in the implied rating. Based on the base case, there is a low sensitivity of rating in terms of decreased recovery (rating reduced 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 of 2 notches (see Table 8):

Table 8: Covered Bond Program Sensitivity: Credit Quality und Recovery Rates | Source: CRA

Recovery / Default	Base Case	-25%	-50%
Base Case	**BB-**	B+	B
+25%	BB-	B+	B
+50%	B+	B	B

Summary Cash-Flow Analysis

Based on public information and using the base case loss assumptions, the analysis showed that obligations can be paid in full and in a timely manner. Overall, the cash flow analysis revealed that the portfolio, given the used information, may ensure the repayment of bonds' nominal capital notwithstanding the occurrence of the presented stressed scenarios. Therefore, the rating of the cover pool within our covered bond program rating has been set at BB-. This, however, did not ensure any secondary rating uplift which has been set at zero (0) notch.

Counterparty Risk

Transaction parties

Table 9: Participant counterparties | Source: Banco Santander Totta S.A.

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
Sponsor	Non available information at rating time	Non available information at rating time

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

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. In order to avoid such risk, the Covered Bond Law stipulates that the cover assets should be isolated from the general bankruptcy estate (insolvency-free assets) and a special cover pool administrator (Bank of Portugal or nominated Credit Institution) will be appointed to manage 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	Initial Rating
Result	AAA
Rating Date	18.02.2019
Publication Date	27.02.2019

Details Cover Pool

Table 10: Characteristics of Cover Pool | Source: Banco Santander Totta S.A.

Characteristics	Value
Cover Pool Volume	EUR 8.937 mm
Covered Bond Outstanding	EUR 7.700 mm
Substitute Assets	EUR 0 mm
Share Derivatives	0,00%
Share Other	0,00%
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 Pools' Composition	
Mortgages	100,00%
Total Substitution Assets	0,00%
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)	93,06%
Second home	6,93%
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	0,00%
Average asset value (Residential)	EUR 52 k
Average asset value (Commercial)	EUR 0 k
Share Non-Performing Loans	0,00%
Share of 10 biggest debtors	0,16%
WA Maturity (months)	314,177
WAL (months)	309,87
Distribution by Country (%)	
Portugal	100,00
Distribution by Region (%)	
North	30,40
Center	17,27
Lisbon	37,95
Alentejo	5,20
Algarve	6,55
Madeira	1,90
Azores	0,73

Figure 6: Arrears Distribution | Source:: Banco Santander Totta S.A.

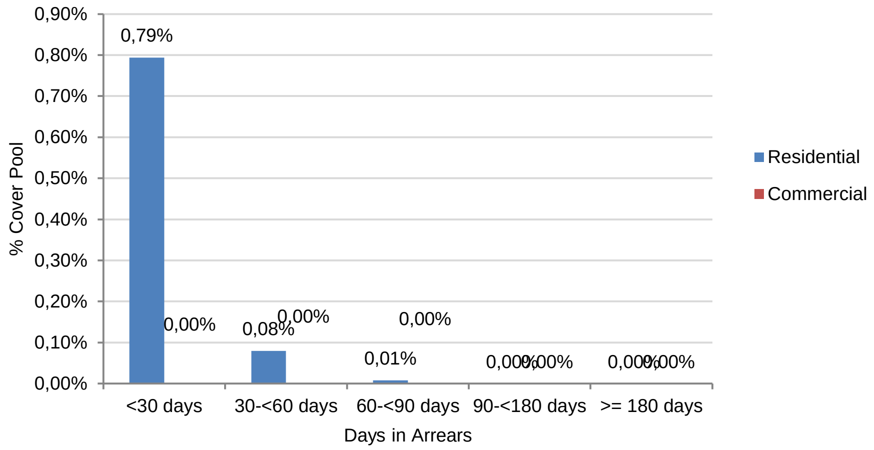


Figure 7: Program currency mismatches | Source: Banco Santander Totta S.A.

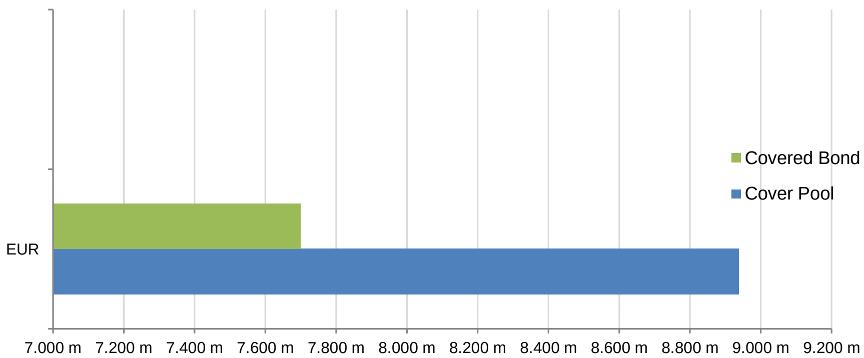
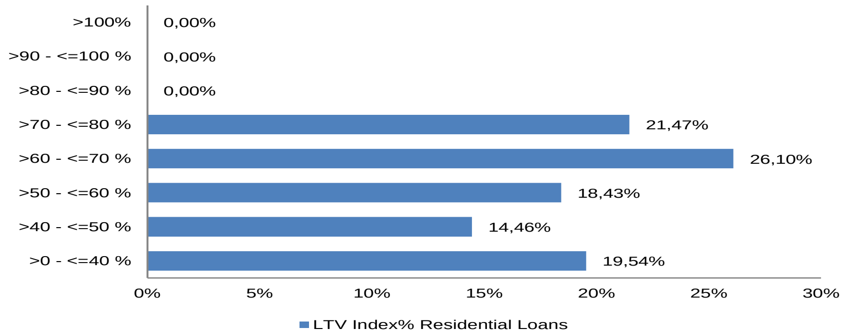


Figure 8: Unindexed LTV breakdown - residential pool | Source: Banco Santander Totta S.A.



Key Source of Information

Documents (Date: 31.12.2018)
Issuer ▪ Audited consolidated annual reports of the parent company Banco Santander S.A. (Group) 2014-2017 ▪ Final Rating report as of 15.08.2018 ▪ Rating file 2018 ▪ Miscellaneous Investor Relations Information and Press releases ▪ Peergroup-Data and other data from the S&P Global Market Intelligence Database
Covered Bond and Cover Pool ▪ HTT Reporting from Banco Santander Totta S.A. (31.12.2018) ▪ Market data Mortgage Cover Bond Program.

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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 in conjunction with Creditreform`s basic document "Rating Criteria and Definitions".

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 S&P Global Market Intelligence subject to a peer group analysis of 25 competing institutes. The cover pool's quantitative analysis for the rated Covered Bond Program was based on the "Harmonised Transparency Template" (HTT) published by Banco Santander Totta S.A.

A complete description of Creditreform Rating´s rating methodologies and Creditreform`s basic document "Rating Criteria and Definitions" is published on the following internet page:

www.creditreform-rating.de/en/regulatory-requirements/

This rating was carried out by analysts Edsson Rodriguez und AFM Kamruzzaman both based in Neuss/Germany. On 18.02.2019, the rating was presented to the rating committee by the analysts and adopted in a resolution.

The rating result was communicated to Banco Santander Totta S.A., 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.

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1. Transaction structure and participants
2. Transaction documents
3. Issuing documents

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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 "Basic data" card 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".

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