MOODY'S INVESTORS SERVICE

CREDIT OPINION

12 February 2020

New Issue

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Bausparkasse Schwaebisch Hall AG - Mortgage Covered Bonds

New Issue Report, reflecting data as of December 31, 2019 – German covered bonds

Ratings

Exhibit 1

Cover Pool (€)	Ordinary Cover Pool Assets	Covered Bonds (€)	Rating
156,159,747	Residential Mortgage Loans	5,000,000	Aaa

Source: Moody's Investors Service

Summary

The covered bonds issued by Bausparkasse Schwaebisch Hall AG (BSH or the Issuer, Aa1(cr)) under it's mortgage programme are full recourse to the issuer and are secured by a cover pool of assets consisting of residential mortgage loans in Germany.

Credit strengths include the full recourse of the covered bonds (*Hypothekenpfandbriefe* or covered bonds) to the issuer and support provided by the German legal framework for *Pfandbriefe*, which provides for the issuer's regulation and supervision. In addition, the German Buildings Societies Act narrows the issuer's scope of business and BSH has put strong emphasis on residential mortgage loan products. This limits BSH's degrees of freedom for the future cover pool composition to a larger extend as compared to most other German mortgage covered bonds.

Credit challenges include the high level of dependency on the issuer and geographical concentration risk, with all loans backed by properties located in Germany (29.2% in Bavaria and 23.3% in Baden-Wuerttemberg).

Our credit analysis takes into account the cover pool's credit quality, which is reflected in the collateral score of 5.0%, and the current over-collateralisation (OC) of 3280% (on an unstressed net present value basis) as of 31 December 2019.

Credit strengths

» ***Recourse to the issuer***: The covered bonds are full recourse to Bausparkasse Schwaebisch Hall AG (Aa1(cr)). (See "Covered bond description")

» ***Support provided by the German legal framework***: The covered bonds are governed by the German *Pfandbrief* Act, which provides for the issuer's regulation and supervision and sets certain minimum requirements for the covered bonds and the cover pool. (See "Moody's related publications: Covered Bond Legal Frameworks")

Closing date

12 February 2020

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Contacts

Patrick Widmayer +49.69.70730.715
VP-Sr Credit Officer
patrick.widmayer@moodys.com

- ***High credit quality of the cover pool***: The covered bonds are supported by a cover pool of high-quality assets. Almost all of the assets (99.4%) are mortgage loans backed by residential use properties in Germany, with the remainder being a bond as subsitute asset. The German Buildings Societies Act narrows the issuer's scope of business and BSH, like its building and loan association peers, has put strong emphasis on residential mortgage loan products. This limits BSH's degrees of freedom for the future cover pool composition to a larger extend as compared to most other German mortgage covered bonds. The collateral quality is reflected in the collateral score, which is currently 5.0%. (See "Cover pool analysis")
- ***Refinancing risk*****:** Following what we call a covered bond (CB) anchor event, refinancing risk would be mitigated by a well-established and deep market for German *Pfandbriefe*, as well as the liquidity-matching requirements for the next 180 days. A CB anchor event occurs when the issuer, or another entity within the issuer group that supports the issuer, ceases to service the payments on the covered bonds. (See "Covered bond analysis")
- ***Interest rate and currency risks***: Interest rate risk is mitigated by the 2.0% OC requirement, which has to be maintained in stressed market conditions (that is, yield curve movements and changes in the relevant exchange rates). Currently all the outstanding liabilities and cover pool assets are fixed rate. Currency risk is also well matched in this programme with all of the assets and liabilities denominated in euros. (See "Covered bond analysis")
- ***Provisions for a cover pool administrator***: Following an issuer default, the covered bondholders would benefit from a cover pool administrator (the *Sachwalter*) that acts independently from the issuer's insolvency administrator. Furthermore, if the German banking regulator BaFin deems it necessary, the *Sachwalter* may be appointed ahead of any issuer default. (See "Covered bond analysis")

Credit challenges

- ***High level of dependency on the issuer:*** As with most covered bonds, before the insolvency of the issuer, the issuer can materially change the nature of the programme. For example, the issuer can add new assets to the cover pool, issue new covered bonds with varying promises and enter into new hedging arrangements. These changes could affect the credit quality of the cover pool as well as the overall refinancing and market risks. Further, if the quality of the collateral deteriorates below a certain threshold, the issuer would have the ability, but not the obligation, to increase the OC in the cover pool. (See "Covered bond analysis")
- ***Cover pool concentration****:* The cover pool has geographical concentration, with all the loans backed by properties in Germany and particular concentration in Bavaria (29.2%) and Baden-Wuerttemberg (23.3%). (See "Cover pool analysis")
- ***Market risks***: Following a CB anchor event, covered bondholders, to achieve timely principal payment, might need to rely on proceeds raised through the sale of, or borrowing against, the cover pool assets. The market value of these assets may be subject to high volatility after a CB anchor event. In addition, covered bondholders might have exposure to interest rate and currency risks. Currently there are no swaps in the programme and all the outstanding covered bonds are hard bullet with no extension on maturity. (See "Covered bond analysis")
- ***Time subordination****:* After a CB anchor event, later-maturing covered bonds are subject to time subordination. Principal cash collections may be used on a first-come, first-served basis, paying earlier-maturing covered bonds before later-maturing covered bonds. This subordination could lead to the erosion of OC before any payments are made to later-paying covered bonds. (See "Covered bond analysis")
- ***Lack of liquidity facility*****:** The programme would not benefit from any designated source of liquidity if cash flow collections are interrupted. (See "Covered bond analysis")

Key characteristics

Exhibit 2
Covered bond characteristics

Moody's Programme Number:	475
Issuer:	Bausparkasse Schwäbisch Hall AG
Covered Bond Type:	Residential mortgage covered bond
Issued under Covered Bonds Law:	Yes
Applicable Covered Bonds Law:	*Pfandbrief* Act
Entity used in Moody's TPI analysis:	Bausparkasse Schwäbisch Hall AG
CR Assessment:	Aa1(cr)
CB Anchor:	CR assessment +1 notch
Deposit rating:	Aa1
Total Covered Bonds Outstanding:	€5,000,000
Main Currency of Covered Bonds:	EUR (100.0%)
Extended Refinance Period:	No
Principal Payment Type:	Hard bullet
Interest Rate Type:	Fixed rate covered bonds (100.0%)
Committed Over-Collateralisation:	2.0% (on a stressed NPV basis)
Current Over-Collateralisation:	3280% (on an unstressed NPV basis)
Intra-group Swap Provider:	No swaps
Monitoring of Cover Pool:	Cover pool monitor (*Treuhänder*), mandatory by operation of the German *Pfandbrief* Act
Trustees:	n/a
Timely Payment Indicator:	High
TPI Leeway:	7 notches

Sources: Moody's Investors Service, issuer data

Exhibit 3
Cover pool characteristics

Size of Cover Pool:	€156,159,747
Main Collateral Type in Cover Pool:	Residential assets (99.4%), Other supplementary assets (0.6%)
Main Asset Location of Ordinary Cover Assets:	Germany (100.0%)
Main Currency:	EUR (100.0%)
Loans Count:	1,270
Number of Borrowers:	1,979
WA Unindexed LTV:	59.4%
WA Indexed LTV:	n/d
WA Seasoning (in months):	12
WA Remaining Term (in months):	166
Interest Rate Type:	Fixed rate assets (100.0%)
Collateral Score:	5.0% (3.7% excluding systemic risk)
Cover Pool Losses:	15.8%
Further Cover Pool Details:	See Appendix 1
Pool Cut-off Date:	31 December 2019

Sources: Moody's Investors Service, issuer data

Covered bond description

The covered bonds issued under the mortgage covered bond programme of Bausparkasse Schwaebisch Hall AG are full recourse to the issuer. Upon a CB anchor event, covered bondholders would have access to a cover pool of residential mortgage loan receivables.

Structure description

The bonds

All outstanding covered bonds have a hard bullet repayment at maturity, without any extension period for the repayment of the bonds.

Issuer recourse

The covered bonds are full recourse to the issuer. Therefore, the issuer is obliged to repay principal and pay interest on the covered bonds.

Recourse to cover pool and over-collateralisation

If the issuer becomes insolvent, the covered bondholders would have priority claims over a pool of assets (cover pool). (See "Cover pool description" for the cover pool characteristics and "Cover pool analysis" for our analysis of the pool)

As of December 2019, the level of OC in the programme was 3280% on an unstressed present value basis.

The current covered bond rating relies on an OC within the minimum legal requirements by the German *Pfandbrief* Act. The act requires that the stressed present value of the cover assets exceeds the stressed present value of the bonds by 2.0%. Based on data as of 31 December 2019, 0.0% of OC is sufficient to maintain the current covered bond rating, which is lower than committed OC. This shows that our analysis currently not relies on OC that is not in committed form.

Although the issuer has the ability to increase the OC in the cover pool if collateral quality deteriorates below a certain threshold, the issuer does not have any obligation to do so. The failure to increase OC following a deterioration of the collateral could lead to a negative rating action.

Legal framework

The covered bonds are governed by the *Pfandbrief* Act. There are a number of strengths in this legislation, including the regulation of the issuer by BaFin, as well as certain minimum requirements for the covered bonds and the cover pool. No specific structural features beyond the statutory requirements are implemented for Bausparkasse Schwaebisch Hall AG's mortgage covered bond programme. (See "Covered Bonds: Germany - Legal Framework for Covered Bonds", July 2019, for a description of the general legal framework for *Hypothekenpfandbriefe* governed by the *Pfandbrief* Act.)

Covered bond analysis

Our credit analysis of the covered bonds primarily focuses on the issuer's credit quality, refinancing risk, interest rate risk and currency risk, as well as the probability that payments on the covered bonds would be made in a timely fashion following a CB anchor event, which we measure using the Timely Payment Indicator. (See "Timely Payment Indicator")

Primary analysis

Issuer analysis - Credit quality of the issuer

The issuer's CR Assessment is Aa1(cr).

The reference point for the issuer's credit strength in our analysis is the CB anchor, which for covered bond programmes under the covered bond law in Germany is the CR Assessment plus one notch.

Issuer analysis - Dependency on the issuer's credit quality

The credit quality of the covered bonds depends primarily on the credit quality of the issuer. If the issuer's credit strength were to deteriorate, there would be a greater risk that a CB anchor event would occur, leading to refinancing risk for the covered bonds. Consequently, the credit quality of the covered bonds would deteriorate unless other credit risks were to decrease.

In the event that the CB anchor deteriorates, the issuer would have the ability, but not the obligation, to increase the OC in the cover pool. Failure to increase the level of OC under these circumstances could lead to a negative rating action.

Reasons for the high level of dependency of the covered bonds with the issuer also include exposure to decisions made by the issuer in its discretion as manager of the covered bond programme. For example, before a CB anchor event, the issuer may add new assets to the cover pool and remove assets from the cover pool, issue further bonds and enter new hedging arrangements. Such actions could reduce the value of the cover pool.

As with most covered bonds in Europe, there are few contractual restrictions on the future composition of the cover pool, which creates substitution risk. Nevertheless, cover pool quality over time will be protected by, among other things, the requirements of the German *Pfandbrief* Act, which specifies what types of assets are eligible. In addition, the German Buildings Societies Act narrows the issuer's scope of business and BSH has put strong emphasis on residential mortgage loan products. This limits BSH's degrees of freedom for the future cover pool composition to a larger extend as compared to most other German mortgage covered bonds. (See "Moody's related publications: Covered Bond Legal Frameworks")

Refinancing risk

Following a CB anchor event, the "natural" amortisation of the cover pool assets alone cannot be relied on to repay the principal. We assume that funds must be raised against the cover pool at a discount if covered bondholders are to receive timely principal payment. Where the portion of the cover pool that is potentially exposed to refinancing risk is not contractually limited, our expected loss analysis typically assumes that this amount is in excess of 50% of the cover pool.

After a CB anchor event, the market value of these assets may be subject to volatility. Examples of the stressed refinancing margins we use for different types of prime-quality assets are published in our Rating Methodology. (See "Moody's related publications - Moody's Approach to Rating Covered Bonds")

The refinancing-positive factors outweigh the negative ones. The refinancing-positive aspects of this covered bond programme include:

» The *Pfandbrief* Act: At the time of the declaration of the issuer's bankruptcy, or earlier if BaFin considers it necessary, a cover pool administrator (the *Sachwalter*) would take over management responsibility of the covered bond programme. The *Sachwalte*r would have the ability to sell all or part of the cover pool, with or without all or parts of the liabilities attached

» The depth of the German market and the high level of government and financial market support expected to be available to *Pfandbriefe* in Germany, where refinancing risk is perceived as lower than in most other jurisdictions. In the modeling of this transaction, we have used refinancing margins that are lower than the refinancing margins used for most other jurisdictions

The refinancing-negative aspects of this covered bond programme include:

» The outstanding covered bond issued under this programme has a hard-bullet repayment schedule, with no extension period, which is typical for German *Pfandbrief* programmes. We expect BSH to issue further hard-bullet bonds under the programme

» A comparably high weighted-average life of the cover pool assets

Interest rate and currency risk

As with the majority of European covered bonds, there is potential for interest rate and currency risks, which could arise from the different payment promises and durations made on the cover pool and the covered bonds. Currently both the assets and liabilities are denominated in euros.

Exhibit 4

Overview of assets and liabilities

	WAL Assets (Years)	WAL Liabilities (Years)	Assets (%)	Liabilities (%)
Fixed rate	14.7	4.2	100.0%	100.0%
Variable rate	n/a	n/a	n/a	n/a

WAL: weighted average life
n/a: not applicable
Sources: Moody's Investors Service, issuer data

In the event of issuer insolvency, we currently do not assume that the *Sachwalter* would always be able to efficiently manage any natural hedge between the cover pool and the covered bonds. Therefore, following a CB anchor event, our model would separately assess the impact of increasing and decreasing interest rates on the expected loss of the covered bonds, taking the path of interest rates that leads to the worst result. The interest rate and currency stresses used over different time horizons are published in our Rating Methodology.

Aspects of this covered bond programme that are market-risk positive include:

» No currency risk. Currently, there are no foreign exchange-denominated covered bonds and cover assets outstanding

» The requirement under the *Pfandbrief* Act that the stressed present value OC of the cover pool must exceed, by at least 2%, the total of outstanding covered bonds issued against the cover pool, and the requirement that *Pfandbrief* issuers must regularly run stress tests regarding interest rate and foreign-exchange risks. Bausparkasse Schwaebisch Hall AG opted for the "static" stress test to meet mandatory stress tests requirements

Aspects of this covered bond programme that are market-risk negative include:

» All of the cover pool assets are fixed rate. A potential sale of fixed-rate assets to meet payments due on covered bonds following a CB anchor event could lead to a crystallisation of mark-to-market losses caused by interest rate movements upon issuer default

» As of the date of this report, Bausparkasse Schwaebisch Hall AG has not entered any swaps into the cover pool register

Timely Payment Indicator

Our Timely Payment Indicator (TPI) assesses the likelihood that timely payments would be made to covered bondholders following a CB anchor event, and thus determines the maximum rating a covered bond programme can achieve with its current structure while allowing for the addition of a reasonable level of OC. We have assigned a TPI of High to these covered bonds, in line with other mortgage covered bonds issued under the *Pfandbrief* Act.

Based on the current TPI of High, the TPI leeway for this programme is seven notches. This seven-notch leeway implies that we might downgrade the covered bonds' rating because of a TPI cap if we were to lower the CB anchor by more than seven notches, all other variables being equal.

The TPI-positive aspects of this covered bond programme include:

» The high level of government and financial market support provided to *Pfandbriefe* in Germany

» The refinancing-positive factors discussed in the "Refinancing risk" section

» The strength of the German *Pfandbrief* legislation, including:

  – The *Sachwalter* would take over management responsibility of the covered bond programme at the time of the declaration of the issuer's bankruptcy, or earlier if BaFin were to consider it necessary

  – The *Sachwalter* would act independently from the issuer's insolvency administrator. Having an independent cover pool administrator might reduce potential conflicts of interest between the covered bondholders and other creditors

  – The issuer is required to cover potential liquidity gaps over the next 180 days between payments expected to be received under the cover pool assets and payments due under the outstanding covered bonds

  – Set-off: We understand that the *Pfandbrief* Act excludes from set-off loans registered in the cover pool that are under German law and located in Germany

» The credit quality of the cover pool assets, reflected by the collateral score of 5.0%.

The TPI-negative aspects of this covered bond programme include:

» All covered bonds outstanding have a hard bullet repayment at maturity, without any extension period for the repayment of the bonds

» The covered bond programme does not benefit from any designated source of liquidity if cash flow collections are interrupted

» Commingling risk: Upon the appointment of the *Sachwalter*, it is our understanding that the *Sachwalter* has a priority claim on all cash flows stemming from the cover pool assets. However, these cash flows have to be separated from other cash flows to the issuer before they can be used to make payments to covered bondholders

Additional analysis

Liquidity

The covered bond programme would not benefit from any designated source of liquidity if cash flow collections were to be interrupted. However, before an issuer default, the *Pfandbrief* Act requires the issuer to cover potential liquidity gaps for the next 180 days and to maintain a minimum OC level of 2.0% on a stressed present value basis. After an issuer default, the *Sachwalter* would have the ability to sell a portion of the cover pool to make timely payments on the bonds.

Time subordination

After a CB anchor event, later-maturing covered bonds would be subject to time subordination. Principal cash collections may be used on a first-come, first-served basis, paying earlier-maturing covered bonds before later-maturing covered bonds. Such payments could result in the erosion of OC before any payments are made to later-paying covered bonds.

Cover pool description

Pool description as of 31 December 2019

As of 31 December 2019, the cover pool consisted of mostly residential mortgage loans (99.4%), and further cover assets that constitute substitute assets under the *Pfandbrief* Act (0.6%). All of the cover assets are loans backed by properties in Germany.

About half of the mortgage loans in the cover pool are annuity loans (48.7%) that are repaid on a monthly basis. The remainder mortgage loans are bullet loans that are combined with a building savings agreement as repayment substitute. The building savings agreements are not part of the cover pool.

On a nominal value basis, the cover pool assets total €156.2 million, which back €5.0 million in covered bonds, resulting in a nominal OC level of 3023%. (For Bausparkasse Schwaebisch Hall AG's underwriting criteria, see "Appendix: Income underwriting and valuation")

All the properties backing the loans are located in Germany, with some geographical concentration in Bavaria (29.2%) and Baden-Wuerttemberg (23.3%). All of the assets are performing.

The weighted average unindexed loan-to-value (LTV) ratio of the residential mortgage loans is 59.4%.

Exhibits below show more details about the cover pool characteristics.

Residential mortgage loans

Exhibit 5

Cover pool summary

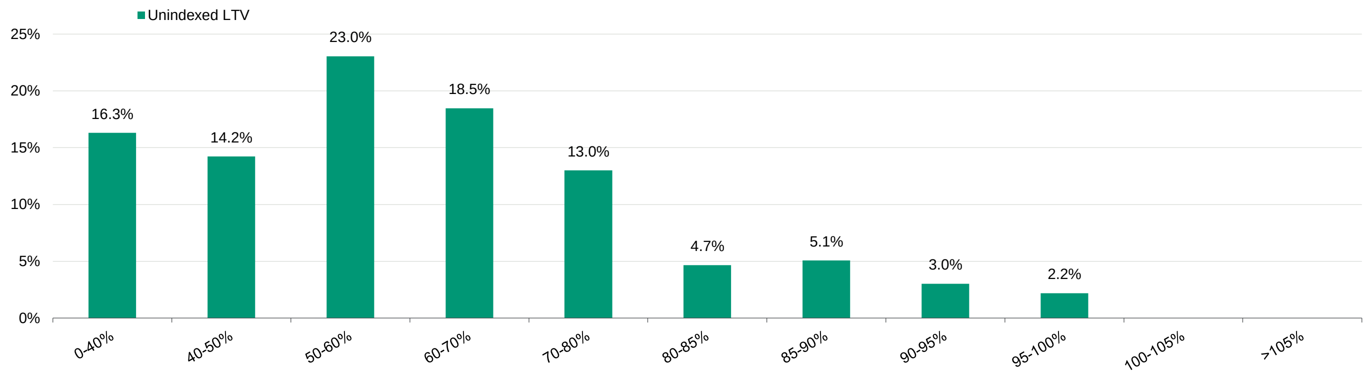
Overview		Specific Loan and Borrower characteristics	
Asset type:	Residential	Loans with an external guarantee in addition to a mortgage:	n/a
Asset balance:	155,159,747	Interest only Loans	51.3%
Average loan balance:	122,173	Loans for second homes / Vacation:	0.0%
Number of loans:	1,270	Buy to let loans / Non owner occupied properties:	10.4%
Number of borrowers:	1,979	Limited income verified:	0.0%
Number of properties:	1,220	Adverse credit characteristics (**)	0.0%
WA remaining term (in months):	166		
WA seasoning (in months):	12	**Performance**	
		Loans in arrears (≥ 2months - < 6months):	0.0%
Details on LTV		Loans in arrears (≥ 6months - < 12months):	0.0%
WA unindexed LTV (*)	59.4%	Loans in arrears (≥ 12months):	0.0%
WA Indexed LTV:	n/d	Loans in a foreclosure procedure:	0.0%
Valuation type:	Lending Value		
LTV threshold:	60.0%	**Multi-Family Properties**	
Junior ranks:	n/d	Loans to tenants of tenant-owned Housing Cooperatives:	n/a
Loans with Prior Ranks:	11.3%	Other type of Multi-Family loans (***)	n/a

* May be based on the property value at the time of origination or further advance or borrower refinancing
** Typically borrowers with a previous personal bankruptcy or borrowers with record of court claims against them at the time of origination
*** "Other" type refers to loans directly to housing co-operatives and to landlords of multifamily properties (not included in buy to let).
n/a = Not applicable.
n/d = No data.
Sources: Moody's Investors Service, issuer data

Exhibit 6
Cover pool characteristics

Exhibit A

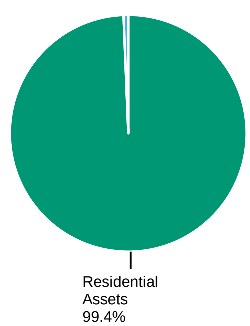
Balance per LTV band



Sources: Moody's Investors Service, issuer data

Exhibit B

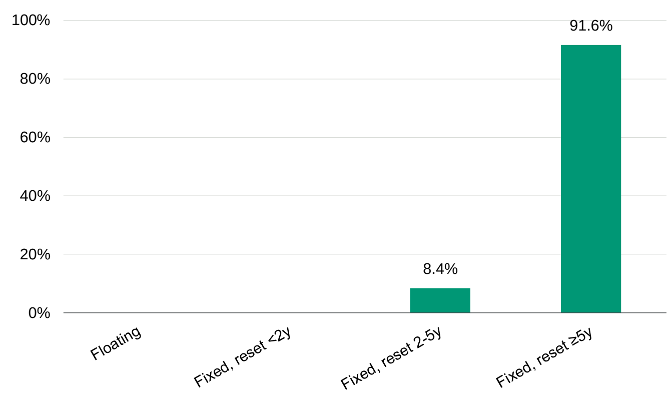
Percentage of residential assets



Sources: Moody's Investors Service, issuer data

Exhibit C

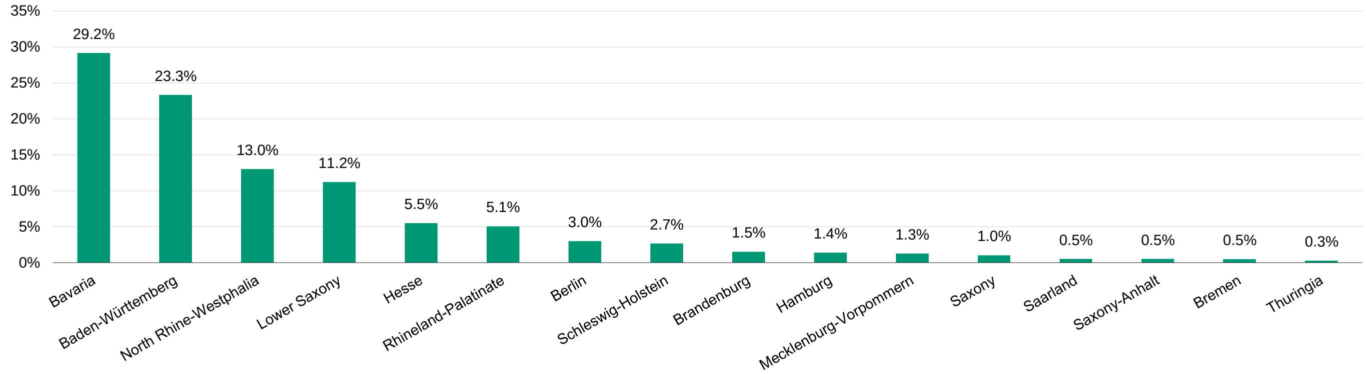
Interest rate type



Sources: Moody's Investors Service, issuer data

Exhibit D

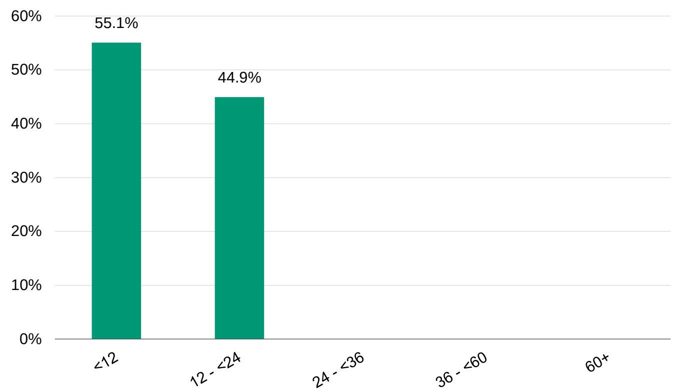
Main country regional distribution



Sources: Moody's Investors Service, issuer data

Exhibit E

Seasoning (in months)



Sources: Moody's Investors Service, issuer data

Substitute assets

Of the cover assets, €1.0 million (0.6%) are substitute assets.

Cover pool monitor

Pursuant to the *Pfandbrief* Act, the regulator (BaFin) has appointed a cover pool monitor (*Treuhänder*). (See “Moody's related publications: Covered Bond Legal Frameworks”)

Cover pool analysis

Our credit analysis of the pool takes into account specific characteristics of the pool, as well as legal risks.

Primary cover pool analysis

We calculate the collateral score for the cover pool using a scoring model to assess the credit risk for the residential assets in the cover pool. Our analysis takes into account, among other factors, the LTV ratios of the mortgage loans, the seasoning and the geographical distribution.

For this programme, the collateral score of the current pool is 5.0%, which is better than the average collateral score of 9.1% in other German mortgage covered bonds. (For details, see "Moody's related publications - Moody's Global Covered Bonds Sector Update, Q3 2019")

Aspects specific to this programme that are credit positive include:

» All of the assets in the cover pool are performing

» The majority of the cover pool loans (81.8%) are owner occupied residential properties

» Under consideration of repayment substitute assets for the bullet loans (51.3%), all loans are amortising either directly or indirectly

» No loan has a LTV ratio above 100% due to the application of the German Buildings Society Act

Aspects specific to this programme that are credit negative include:

» The cover pool's seasoning is comparatively low (12 months)

» The cover pool has regional concentration in Bavaria (29.2%) and Baden-Wuerttemberg (23.3%)

Comparables

Exhibit 7

Comparables - Bausparkasse Schwaebisch Hall AG - Mortgage Covered Bonds and other deals

PROGRAMME NAME	Bausparkasse Schwaebisch Hall AG - Mortgage Covered Bonds	Santander Consumer Bank AG - Mortgage Covered Bonds	ING-Diba AG - Mortgage Covered Bonds	Commerzbank AG - Mortgage Covered Bonds
Overview				
Programme is under the law	Pfandbrief Act	Pfandbrief Act	Pfandbrief Act	Pfandbrief Act
Main country in which collateral is based	Germany	Germany	Germany	Germany
Country in which issuer is based	Germany	Germany	Germany	Germany
Total outstanding liabilities	5,000,000	500,000,000	3,705,000,000	17,293,831,465
Total assets in the Cover Pool	156,159,747	817,846,074	5,101,151,710	28,155,638,972
Issuer name	Bausparkasse Schwaebisch Hall AG	Santander Consumer Bank	ING-DiBa AG	Commerzbank AG
Issuer CR assessment	Aa1(cr)	A1(cr)	Aa2(cr)	A1(cr)
Group or parent name	n/a	Santander Consumer Finance S.A.	n/a	n/a
Group or parent CR assessment	n/a	A3(cr)	n/a	n/a
Main collateral type	Residential	Residential	Residential	Residential
Collateral types	Residential 99%, Commercial 0%, Public Sector 0%, Other/Supplementary assets 1%	Residential 97%, Commercial 0%, Public Sector 0%, Other/Supplementary assets 3%	Residential 95%, Commercial 0%, Public Sector 0%, Other/Supplementary assets 5%	Residential 96%, Commercial 2%, Public Sector 0%, Other/Supplementary assets 2%
Ratings				
Covered bonds rating	Aaa	Aaa	Aaa	Aaa
Entity used in Moody's EL & TPI analysis	Bausparkasse Schwaebisch Hall AG	Santander Consumer Bank AG	ING-DiBa AG	Commerzbank AG
CB anchor	CR Assessment + 1 notch	CR Assessment + 1 notch	CR Assessment + 1 notch	CR Assessment + 1 notch
CR Assessment	Aa1(cr)	A1(cr)	Aa2(cr)	A1(cr)
LT Deposit	Aa1	A3	A2	A1
Unsecured claim used for Moody's EL analysis	Yes	Yes	Yes	Yes
Value of Cover Pool				
Collateral Score	5.0%	5.0%	5.0%	5.7%
Collateral Score excl. systemic risk	3.7%	1.7%	3.0%	3.5%
Collateral Risk (Collateral Score post-haircut)	3.4%	3.4%	3.4%	3.7%
Market Risk	12.4%	11.7%	12.4%	12.2%
Over-Collateralisation Levels				
Committed OC*	2.0%	2.0%	2.0%	2.0%
Current OC	3280.0%	76.6%	43.6%	67.4%
OC consistent with current rating	0.0%	5.5%	0.0%	6.5%
Surplus OC	3280.0%	71.1%	43.6%	60.9%
Timely Payment Indicator & TPI Leeway				
TPI	High	High	High	High
TPI Leeway	7	4	6	4
Reporting date	31 December 2019	01 October 2019	30 September 2019	30 September 2019

*We consider this level of OC as committed according to our methodology even though the level of OC provided via the asset cover test might be higher because the issuer could reduce the level of OC down to this level without a rating impact on our covered bond rating.
Sources: Moody's Investors Service, issuer data

Methodology and monitoring

The primary methodology we use in rating the issuer's covered bonds is “Moody's Approach to Rating Covered Bonds”, published in February 2019. Other methodologies and factors that may have been considered in the rating process can also be found on http://www.moodys.com. In addition, we publish a weekly summary of structured finance credit, ratings and methodologies, available to all registered users of our website, at www.moodys.com/SFQuickCheck.

We expect the issuer to deliver certain performance data to us on an ongoing basis. In the event that this data is not made available to us, our ability to monitor the ratings may be impaired. This lack of data availability could negatively affect the ratings or, in some cases, our ability to continue to rate the covered bonds.

Appendix: Income underwriting and valuation

Exhibit 8

Income underwriting and valuation

A. Residential Income Underwriting	
1 Is income always checked?	Yes
2 Does this check ever rely on income stated by borrower ("limited income verification") ?	No, always verified
3 Percentage of loans in Cover Pool that have limited income verification	None
4 If limited income verification loans are in the Cover Pool, describe what requirements lender has in place for these loans.	Not applicable
5 Does income in all cases constrain the amount lent (for example through some form of Income Sufficiency Test ("IST")?	Yes
6 If not, what percentage of cases are exceptions.	No exceptions
For the purpose of any IST:	
7 Is it confirmed that income after tax is sufficient to cover both interest and principal?	Yes
8 If so over what period is it assumed principal will be paid (typically on an annuity basis)? Any exceptions?	Payment of interest and principal over the whole lifetime of the loan, i.e. until maturity
9 Does the age of the borrower constrain the period over which principal can be amortised?	Yes
10 Are any stresses made to interest rates when carrying out the IST? If so when and for what type of products?	Yes, in general a minimum annuity (higher than the contractual annuity) is applied in the IST – this provides comfort for unforeseen events and interest rate changes after the end of the fixed rates period
11 Are all other debts of the borrower taken into account at the point the loan is made?	Yes
12 How are living expenses of the borrower calculated? And what is the stated maximum percentage of income (or income multiple if relevant) that will be relied on to cover debt payments. (specify if income is pre or post tax)	Expenses are based on borrower's statement; however minimum expenses are applicable according to internal policy. Disposable income post tax has to cover loan payments and living expenses.
Other comments	

B. Residential Valuation	
1 Are valuations based on market or lending values?	Mortgage lending value (Beleihungswert) according to German lending value regulation (BelWertV)
2 Are all or the majority of valuations carried out by external valuers (with no direct ownership link to any company in the Sponsor Bank group)?	Yes, the majority of valuations are carried out by external valuers (as of Dec. 2019)
3 How are valuations carried out where an external valuer not used?	Valuations are carried out by qualified internal staff (independent from staff carrying out lending decision) according to §24 BelWertV
4 What qualifications are external valuers required to have?	Certified profound property valuation knowledge and experience according to DIN EN ISO/IEC 17024 (HypZert, German market standard)
5 What qualifications are internal valuers required to have?	Profound property valuation knowledge and experience
6 Do all external valuations include an internal inspection of a property?	Yes
7 What exceptions?	None
8 Do all internal valuations include an internal inspection of a property?	Yes
9 What exceptions?	None
Other comments	

Sources: Issuer

Moody's related publications

Rating Methodology

» Moody's Approach to Rating Covered Bonds, February 2019 (1154442)

Special Comments

» Covered Bods: Sector update - Q3 2019: Covered bonds gain traction in Central and Eastern European markets, October 2019 (1195474)

» Covered bonds - Global: 2020 Outlook, December 2019 (1195966)

Webpages

» Covered Bonds: www.moodys.com/coveredbonds

» Covered Bond Legal Frameworks: www.moodys.com/Pages/CoveredBondLegalFrameworks.aspx

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

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