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NEW ISSUE REPORT

Landesbank Baden-Wuerttemberg Mortgage Covered Bonds

Covered Bonds / Germany

First Rating Assignment

2008

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Definitive Ratings

Cover Pool (€)	Ordinary Cover Pool Assets	Covered Bonds (€)	Rating
13,334,380,651	Commercial and residential mortgage loans	8,064,954,617	Aaa

The ratings address the expected loss posed to investors. Moody's ratings address only the credit risks associated with the transaction. Other non-credit risks have not been addressed, but may have a significant effect on yield to investors

Transaction Summary

We have assigned a definitive long-term rating of Aaa to the covered bonds issued under the mortgage covered bond programme (*Hypothekenpfandbriefe* or covered bonds) of Landesbank Baden-Wuerttemberg (LBBW, or the issuer; Aa3(cr)). The covered bonds are full recourse to the issuer.

Following a CB anchor event,[1] the covered bondholder's claims will be secured by a pool of assets (cover pool). As of 31 December 2015, the assets in LBBW's cover pool amounted to €13.3 billion. The vast majority of the cover pool is mortgage loans backed by residential (53.5%) and commercial properties (44.1%). 2.4% are supplementary assets which are required as statutory over-collateralisation. 87.5% of the properties backing the mortgage loans are located in Germany.

The covered bonds are governed by the German *Pfandbrief* Act (*Pfandbriefgesetz*). There are a number of strengths in the German *Pfandbrief* legislation, including, *inter alia*, the regulatory requirement for the issuer to maintain a 2% over-collateralisation (OC) on a stressed present value (PV) basis. The issuer is also required to cover potential liquidity gaps over the next 180 days between payments expected to be received from the cover pool assets and payments due under the outstanding covered bonds.

In summary, the rating takes into account the following factors:

» The credit strength of the issuer (CR Assessment Aa3(cr))

» The German legal framework for *Pfandbriefe*

» The cover pool's credit quality, which is reflected by the collateral score of 8.8%

As per 31 December 2015, the level of OC in the programme was 73.9% on an unstressed present value basis.

The current covered bond rating relies on over-collateralisation over and above the minimum legal requirements by the German Pfandbrief Act. Based on data as of 31 December 2015, 0.5% of over-collateralisation is sufficient to maintain the current covered bond rating. This shows that our analysis does not rely on over-collateralisation that is not in committed form.

As is the case with other covered bonds, we consider the transaction to be linked to the issuer's credit strength, particularly from a default probability perspective. Should the issuer's credit strength deteriorate, we expect all other things being equal that the covered bonds' rating will come under pressure.

In case of deterioration of the CB anchor or the pool quality, the issuer would have the ability, but not obligation, to increase the OC in the cover pool. Failure to increase the level of OC under these circumstances could lead to negative rating actions.

The principal methodology we use in rating the issuer's covered bonds is "Moody's Approach to Rating Covered Bonds", published in August 2015.

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.

Opinion

Strengths of the Transaction

Issuer: The covered bonds are full recourse to Landesbank Baden-Wuerttemberg (Aa3(cr)).

The German legal framework: The covered bonds are governed by the German *Pfandbrief* Act. There are a number of strengths in the German *Pfandbrief* legislation, including, *inter alia*:[2]

- Under the terms of the German legislation, the issuer is regulated and supervised by the Financial Supervisory Authority of Germany (*Bundesanstalt für Finanz-dienstleistungsaufsicht* or BaFin).
- If the issuer becomes insolvent, the covered bondholder will have priority claims over a pool of assets (cover pool).
- The *Pfandbrief* Act sets out strict eligibility criteria for cover pool assets. Eligible assets for *Hypothekenpfandbriefe* are mortgage loans backed by commercial and residential properties.
- The issuer must maintain a minimum 2% stressed PV OC at all times.
- The issuer must 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.
- A cover pool monitor (*Treuhänder*) is responsible for monitoring various cover pool operations.

Credit Quality of the Cover Pool

The covered bonds are supported by a cover pool backed by high-quality assets. Most of the claims are mortgage loans backed by properties in Germany. The collateral quality is reflected in the collateral score, which is currently 8.8%.

Refinancing Risks

- There is a well-established and deep market for German *Pfandbriefe*.
- The liquidity matching requirements for the next 180 days reduce refinancing risk (see above).

Market Risks

- The OC of 2% on a PV basis has to be maintained in stressed market conditions (e.g., yield curve movements, changes in the relevant exchange rates). LBBW opted for the static approach, which inter alia includes a parallel movement of the interest-rate curve by 250 basis points, to meet mandatory stress test requirements.
- The FX risks are well matched in this programme. The vast majority of the assets and all liabilities are denominated in euros.

De-linkage: Following an issuer default,[3] the covered bondholders will benefit from an cover pool administrator (*Sachwalter*) that acts independently from the issuer's insolvency administrator. Furthermore, if BaFin deems it necessary, the *Sachwalter* may be appointed ahead of any issuer default.

Weaknesses and Mitigants

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 cover pool's credit quality as well as the overall refinancing risk and market risks.

Mitigants: (1) The covered bondholders have a direct claim on the issuer; and (2) the requirements and controls imposed by the *Pfandbrief* legislation.

Cover Pool Credit Quality

The ordinary cover assets are mortgage loans backed by residential and commercial properties. The cover pool has the following concentrations: (1) geographical concentration: 87.5% of the properties backing the mortgage loans are located in Germany.; and (2) obligor concentration: the 10 largest obligors account for 34.1% of the commercial mortgage loans. **Mitigant**: Our collateral score model takes into account, *inter alia,* the impact of borrower, regional and country concentrations.

As with most covered bonds in Europe, there are few restrictions on the future composition of the cover pool, creating substitution risk. Cover pool quality over time will be protected by, among others, the requirements of the German *Pfandbrief* Act. The *Pfandbrief* Act sets out rules detailing which assets qualify as ordinary cover assets for *Hypothkenpfandbriefe*. In addition, we will monitor the cover pool. If collateral quality deteriorates below a certain threshold, 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 following cover pool deterioration could lead to negative rating actions.

Refinancing Risk:

Following a CB anchor event, covered bondholders, to achieve timely principal payment, may need to rely on proceeds being raised through the sale of, or borrowing against, cover pool assets. Following a CB anchor event, the market value of these assets may be subject to high volatility. **Mitigants**: (1) the credit strength of the issuer. The stronger the credit of the issuer, the lower the chance of being exposed to this risk; (2) the depth of the German market; (3) the high level of support provided to *Pfandbriefe* in Germany; and (4) our use of stressed refinancing margins in modelling.

Interest Rate and Currency Risk:

As with most European covered bonds, there is potential for market risk exposure. For example, following issuer default, covered bondholders may be exposed to interest rate and foreign exchange risk, which could arise from the different payment promises and durations made on the cover pool and the covered bonds. Currently 76.5% of the assets are fixed rate, whereas most of the liabilities are floating. **Mitigant**: the requirement 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.

Liquidity:

The programme does not benefit from any designated source of liquidity if cash flow collections are interrupted. **Mitigants**: the strengths of the *Pfandbrief* Act, which include (1) the alternatives given to the *Sachwalter* for raising funds against the cover pool; (2) the minimum 2% OC on a stressed present value basis; and (3) the liquidity matching requirements for the next 180 days.

Time Subordination:

After issuer default, 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 prior to later-maturing covered bonds. This could lead to OC being eroded before any payments are made to later-paying covered bonds.

Structure Summary

Issuer:	Landesbank Baden-Wuerttemberg (Aa3(cr))
Covered Bond Type	Mortgage covered bonds (*Hypothekenpfandbriefe*)
Issued under Covered Bonds Law:	Yes
Applicable Covered Bonds Law:	German *Pfandbrief* Act
Main Originators:	LBBW
Main Servicers:	LBBW
Intra-group Swap Provider:	n/a (no swaps)
Monitoring of Cover Pool:	Cover pool monitor (*Treuhänder*), mandatory by operation of the *Pfandbrief* Act
Trustees:	n/a
Timely Payment Indicator:	High
TPI Leeway	5 notches

CB Anchor

CR Assessment	Aa3(cr)
Senior unsecured rating	A1
Adjusted BCA	baa1
CB Anchor	CR assessment +1 notch

Covered Bonds Summary

Total Covered Bonds Outstanding:	€ 8,064,954,617
Main Currency of Covered Bonds:	Euro (88.8%), USD (11.2%)
Extended Refinance Period:	No
Principal Payment Type:	Hard bullet (no extension period)
Interest Rate Type:	Fixed rate covered bonds (90.3%), variable rate covered bonds (9.7%)

Collateral Summary

Size of Cover Pool:	€ 13,334,380,651
Main Collateral Type in Cover Pool:	Residential mortgage loans (53.5%), commercial mortgage loans (44.1%), and further cover assets (2.4%)
Main Asset Location:	Germany
Main Currencies:	Euro (88.3%), USD (8.1%), GBP (3.3%)
Loans Count:	65,330 residential, and 2,638 commercial mortgage loans
Number of Borrowers	49,684 residential, and 1,510commercial borrowers
Concentration of 10 Biggest Borrowers:	34.1% (of the commercial assets)
WA Current LTV	n/d
WA Seasoning	92 (residential mortgages), 63 (commercial mortgages)
WA Remaining Term:	n/d
Interest Rate Type:	Fixed rate assets (76.5%), floating rate assets (23.5%)
"Committed" Over-Collateralisation:	2% (mandatory minimum OC based on stressed present value calculation required by the *Pfandbrief* Act)
Current Over-Collateralisation	73.9% (on non-stressed present value basis)
Collateral Score:	8.8%
Cover Pool Losses	18.4%
Further Details:	See Appendix 1
Pool Cut-off Date:	31 December 2015

Structural and Legal Aspects

Hypothekenpfandbriefe Governed by the *Pfandbrief* Act

Landesbank Baden-Wuerttemberg 's Mortgage covered bonds (*Hypothekenpfandbriefe*) are governed by the German *Pfandbrief* Act. No specific structural features beyond the statutory requirements are implemented for LBBW's mortgage covered bond programme.

A description of the general legal framework for *Oeffentliche Pfandbriefe* governed by the *Pfandbrief* Act is contained in Moody's Special Report Germany - Legal Framework for Covered Bonds, published in August 2015

Moody's Rating Methodology

Our approach for rating covered bond transactions is detailed in our Rating Methodology.[4] The impact of the credit strength of the issuer, collateral quality, refinancing and market risks are considered below.

Credit Strength of the Issuer

The covered bondholders have full recourse to Landesbank Baden-Wuerttemberg. For a description of the rating drivers, please see an extract from our Credit Opinion, published February 2016:

We use a CB anchor of CR assessment plus one notch for covered bonds issued under a EU covered bond law.

The Credit Quality of the Cover Pool

As of 31 December 2015, the cover pool consists of residential (53.5%) and commercial mortgage loans (44.1%), and further cover assets (2.4%). 87.3% of the cover pool assets are loans backed by properties located in Germany.

On a nominal value basis, the cover pool assets total €13.3 billion, which are backing €8.1 billion covered bonds. This translates into an OC level on a PV basis of 73.9%.

For LBBW's underwriting criteria, see Appendix 2.

Residential Mortgage Loans

€7.1 billion of the cover assets are residential mortgage loans backed by properties in Germany.

From a credit perspective, we view positively the following characteristics of the cover assets:

» The LTV is not disclosed; however, according to German law only loan parts below 60% of the lending value can be included in the cover pool.

» No loan is in arrears of more than two months.

» 85.4% of the loans are amortising, and 60.3% have a seasoning of more than 5 years.

From a credit perspective, we view negatively the following portfolio characteristics:

» 14.6% of the residential mortgage loans are bullet.

Commercial Mortgage Loans

Mortgage loans backed by commercial properties amount to €5.9 billion. Of that 45.9% are backed by offices and 22.1% by retail properties. The properties backing the commercial mortgages are mainly located in Germany (72%); the rest of the properties is located in the US (18%) and the UK (7%).

From a credit perspective, we view positively the following characteristics of the cover assets:

» All assets are performing, and none are in arrears for more than 2 months.

» The high share of office and retail properties.

From a credit perspective, we view negatively the following portfolio characteristics:

» Obligor concentration: The 10 largest obligors account for 34.1%.

» Regional concentration: The vast majority (72%) of properties are located in Germany. **Mitigants**: (1) The credit quality of the obligors, including the largest obligors in the cover pool, is generally high; and (2) in our modelling, we have considered the obligor and regional concentrations.

Summary Collateral Analysis: Collateral Score

The factors discussed above have been incorporated into our analysis. We calculate a collateral score[5] based on the credit quality of the cover pool assets as described above. In addition, the collateral score published in this report reflects all adjustments made; this number therefore includes the cushion built in to address the factors described above.

More generally, we calculate the collateral score for the commercial mortgages using a mutil-factor model which is solved through a Monte Carlo simulation. For the residential collateral score we apply a scoring model. Our analysis takes into account, *inter alia,* the impact of concentration on borrower, regional and country levels as well as individual borrowers' credit quality.

For this transaction, the collateral score of the current pool is 8.8% which is slightly better than the average collateral score in German mortgage covered bonds (see Related Research: Moody's Global Covered Bonds Monitoring Overview: Q3 2015, published in March 2016).

Other Credit Considerations

Legal Risks for Assets Located Outside Germany

In the event of the issuer's insolvency, we believe that cover pool assets located outside Germany are less protected against claims of the issuer's other creditors than are assets located in Germany. In particular, we have identified and analysed the following scenarios:

» **Claims against borrowers located outside Germany or loans not governed by German law**: In the case of loans not governed by German law, the borrower may be allowed to exercise set-off, thereby reducing the amount payable to the benefit of covered bondholders. **Mitigant**: The majority of the cover pool assets are located in Germany.

» **Loans to borrowers located outside the European Economic Area (EEA)**: In addition to the above risk, we understand that these cover pool assets may not be available to the covered bondholders on a priority basis because other (unsecured) creditors of the issuer may successfully access the assets in the cover pool. This may – due to secondary proceedings being commenced under the respective domestic law, for example – result in lower recovery. **Mitigant**: The cover pool contains mainly assets located within the EEA. In addition, LBBW has created a trust structure which is designed to extend the priority rights of covered bondholders to those assets which are included in this trust.[6] Currently, all US assets in the cover pool are included.

Substitution Risks are Mitigated by the *Pfandbrief* Act

As with most covered bonds in Europe, there are few restrictions or limitations on the future composition of the cover pool. This may create substitution risk. **Mitigants**: (1) requirements of the *Pfandbrief* Act; and (2) our monitoring of the cover pool composition.

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 to support the current rating. If additional OC is not added following a deterioration of the collateral, this could lead to a negative rating action.

For further information on the credit quality of the cover pool, see Appendix 1.

Refinancing Risk

Following a CB anchor event, the "natural" amortisation of the cover pool assets alone cannot be relied on to repay 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 certain volatility. Examples of the stressed refinancing margins we use for different types of prime-quality assets are published in our Rating Methodology (see Related Research: "Moody's Approach to Rating Covered Bonds", published in August 2015).[7]

Refinancing-positive aspects of this covered bond programme include:

» *Pfandbrief* Act: The *Sachwalter* has 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 support provided to *Pfandbriefe* in Germany, where refinancing risk is perceived as lower than in most other jurisdictions. In the modelling of this transaction, we have used refinance margins that are lower than the refinance margins used for most other jurisdictions.

» 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 the payments due under the outstanding covered bonds.

Refinancing-negative aspects of this covered bond programme include:

» The programme does not benefit from any contractual provisions to allow for an extension of a principal refinancing period; all covered bonds issued under this programme will have a hard bullet repayment with no extension period.

» As usual in German Pfandbrief programmes, all covered bonds are bullets.

Interest Rate and Currency Risk

As with the majority of European covered bonds, there is potential for interest-rate and currency risks. For example, following a CB anchor event, covered bondholders may be exposed to interest-rate risk, which could arise from the different payment promises and durations made on the cover pool and the covered bonds.

EXHIBIT 1

Overview Assets and Liabilities

	Assets (%)	Liabilities (%)	WAL Assets (Years)	WAL Liabilities (Years)
Fixed rate	76.5	90.3	4.9	3.5
Variable rate	23.5	9.7	3.5	2.8

WAL = weighted-average life

n/a = not applicable

As of the date of this report, LBBW has not entered any swaps into the cover pool register. We understand that there are no plans to change this in the near future.

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

» Very limited currency risk.

» The mandatory present value cover test stipulated by the German Pfandbrief Act. The requirement that *Pfandbrief* issuers must regularly run stress tests regarding interest-rate and foreign-exchange risks. LBBW opted for the 'static' stress test to meet mandatory stress tests requirements.

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

» A potential sale of fixed-rate assets (in order to meet due payments 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; most of the cover pool assets are fixed rate.

In the case of issuer insolvency, we currently do not assume that the special cover pool administrator (*Sachwalter*) will always be able to efficiently manage any natural hedge between the cover pool and the covered bonds. Therefore, following a CB anchor event, our Covered Bond Model separately assesses 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 and currency stressed rates used over different time horizons are published in our Rating Methodology (see Related Research: Moody's Approach to Rating Covered Bonds, published in August 2015).

Linkage

All covered bonds are linked to the covered bonds issuer. The covered bonds will therefore come under rating stress if the issuer's credit strength deteriorates. Reasons for this include:

» Refinancing risk: Following a CB anchor event, if principal receipts from collections of the cover pool are not sufficient to meet the principal payment on a covered bond, funds may need to be raised against the cover pool. However, the fact that the issuer has defaulted may negatively affect the ability to raise funds against the cover pool.

» 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, issue further bonds and enter new hedging arrangements. Such actions could negatively affect the value of the cover pool.

» More generally, by the incorporation of the strength of the issuer in accordance with our rating methodology.

As a result of this linkage, the probability of default of the covered bonds may be higher than expected for a senior unsecured debt with the same rating. However, our primary rating target is the expected loss that takes loss severity into account, which in this case is consistent with the covered bond rating.

Timely Payment Indicator

Our Timely Payment Indicator (TPI)[8] assesses the likelihood that timely payments will 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 amount of OC.

TPI-positive aspects of this covered bond programme include:

» The high level of support provided to *Pfandbriefe* in Germany

» German *Pfandbrief* legislation, including:

  – At the time of the declaration of issuer's bankruptcy, or earlier if BaFin considers it necessary, a cover pool administrator (*Sachwalter*) will take over management responsibility of the covered bond programme.

  – The *Sachwalter* will act independently from the issuer's insolvency administrator. Having an independent cover pool administrator may 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, with respect to covered bonds governed by the *Pfandbrief* Act, that set-off risk for loans registered in the cover pool, made under German law and located in Germany, is excluded by the operation of the *Pfandbrief* Act.

  – The credit quality of the cover pool assets, which is evidenced by the collateral score of 8.8%.

TPI-negative aspects of this covered bond programme include:

» All covered bonds outstanding have a 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.

In line with the other Mortgage covered bonds issued under the German *Pfandbrief* Act, we have assigned a TPI of High to this transaction.

The TPI Leeway measures the number of notches by which Moody's might lower the CB anchor before the rating agency downgrades the covered bonds because of TPI framework constraints. Based on the current TPI of High, the TPI Leeway for this programme is 5 notches, therefore a downgrade of the CB anchor by more than 5 notches could lead to a downgrade of the covered bonds, all other variables being equal.

Monitoring

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 could negatively affect the ratings or, in some cases, our ability to continue to rate the covered bonds.

Appendix 1: Cover Pool Information

Residential Mortgage Loans

Overview	
Asset Type	Residential
Asset balance:	7,130,551,349
Average loan balance:	109,147
Number of loans:	65,330
Number of borrowers:	49,684
Number of properties:	n/d
WA Remaining Term (in months):	n/d
WA Seasoning (in months):	92
Details on LTV	
WA current LTV (*):	n/d
WA Indexed LTV:	n/d
Valuation type:	Lending Value
LTV threshold:	60.0%
Junior ranks:	n/d
Prior ranks:	n/d

Specific Loan and Borrower characteristics	
Loans benefiting from a guarantee:	n/a
Interest Only Loans:	14.6%
Loans for second homes / Vacation:	n/d
Buy to Let loans / Non owner occupied properties:	n/d
Limited income verified	n/d
Adverse Credit Characteristics(**):	n/d
Performance	
Loans in arrears (≥ 2months - < 6months):	0.0%
Loans in arrears (≥ 6months - < 12months):	0.0%
Loans in arrears (> 12months):	0.0%
Loans in a foreclosure procedure:	0.0%
Multi-Family Properties	
Loans to tenants of tenant-owned Housing Cooperatives:	n/a
Other type of Multi-Family loans	n/a

(*) Based on most recent property valuation (property valuations are regularly updated by issuer during the term of the loan, initial valuations were not reported)

(**) Refers to borrowers with previous missed payments, borrowers with a previous personal bankruptcy or borrowers with record of court claims against them at time of origination

EXHIBIT A

Balance per LTV-band

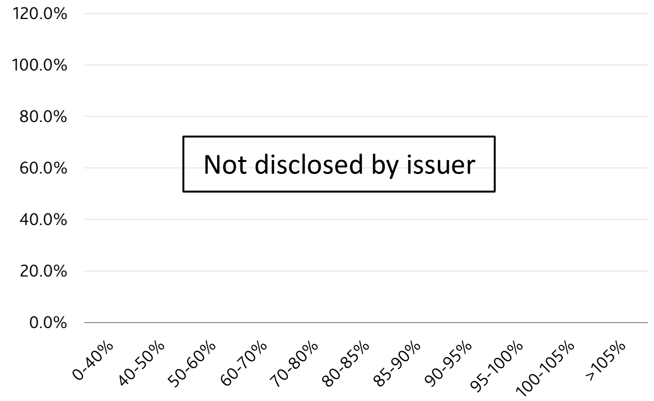


EXHIBIT B

Percentage of Residential Assets

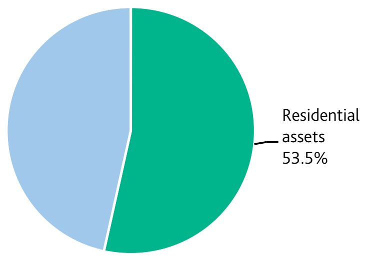


EXHIBIT C

Seasoning

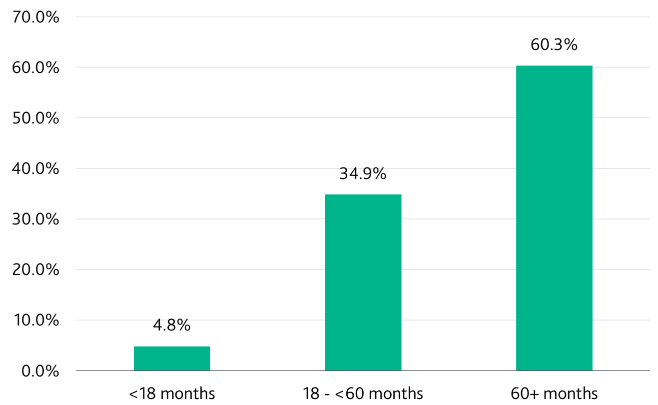


EXHIBIT D

Interest Rate Type

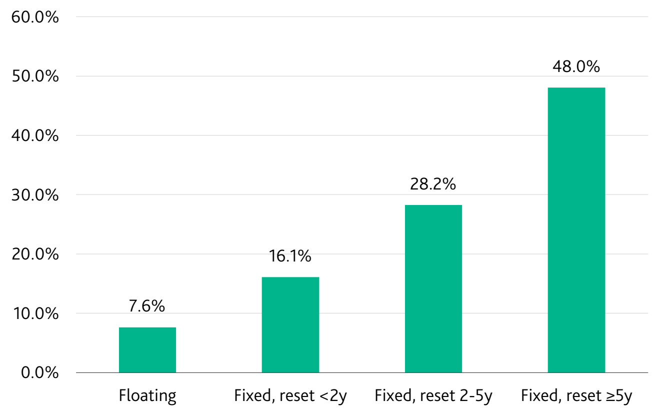
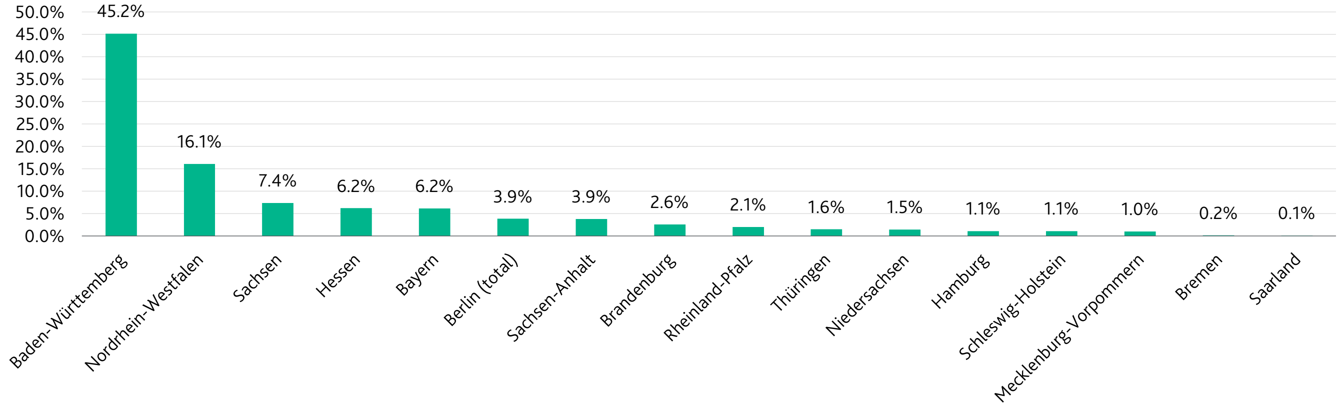


EXHIBIT E

Regional Distribution



Commercial Mortgage Loans

Overview	
Asset Type	Commercial
Asset balance:	5,885,363,809
Average loan balance:	2,230,749
Number of loans:	2,638
Number of borrowers:	1,510
Number of properties:	2,581
Largest 10 loans:	n/d
Largest 10 borrowers:	34.1%
WA Remaining Term (in months):	n/d
WA Seasoning (in months):	63
Main Countries:	Germany (72%)
	USA (18%)
	UK (7%)

Specific Loan and Borrower characteristics	
Bullet loans:	52.6%
Loans in non-domestic currency:	n/d
Percentage of fixed rate loans:	56.0%
Performance	
Loans in arrears (≥ 2months):	0.0%
Loans in a foreclosure procedure:	0.0%
Details on LTV	
WA current LTV (*):	n/d
WA Indexed LTV:	n/d
Valuation type:	Lending Value
LTV Threshold:	60.0%
Junior ranks:	n/d
Prior ranks:	n/d

(*)Based on most recent property valuation (property valuations are regularly updated by originator during the term of the loan, initial valuations were not reported)

n/d : information not disclosed by issuer

EXHIBIT F
Balance per LTV-band

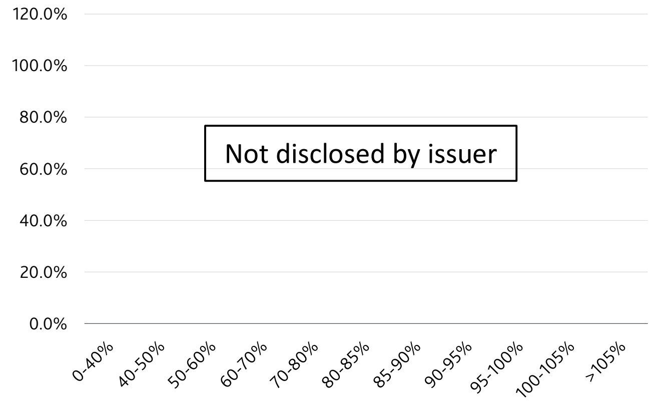


EXHIBIT G
Percentage of Commercial Assets

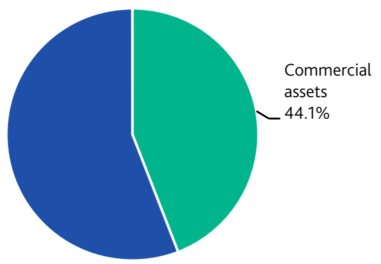


EXHIBIT H
Borrower Concentration

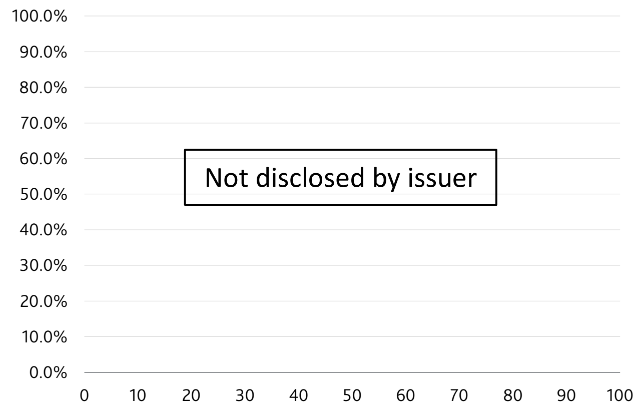


EXHIBIT I
Property Type

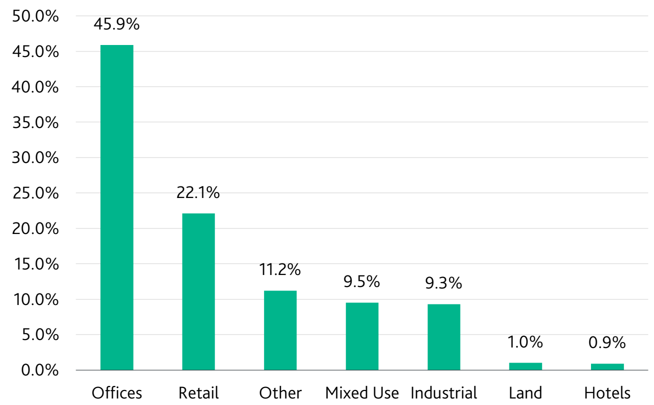


EXHIBIT J

Regional Distribution for Main Country

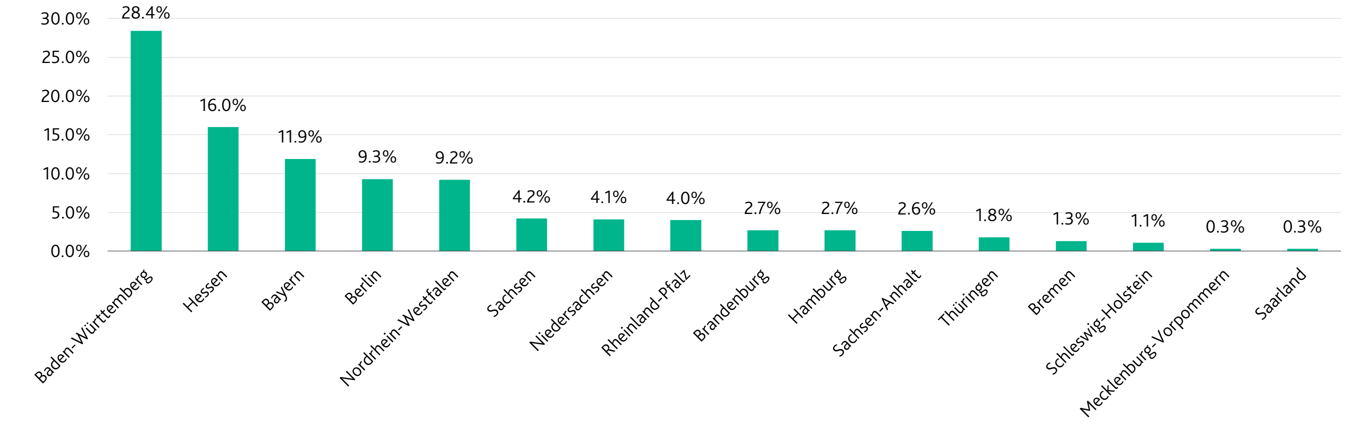


EXHIBIT K

Remaining Term (in years)

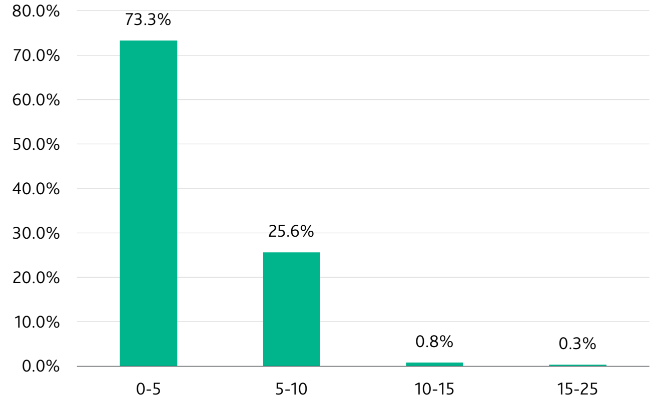
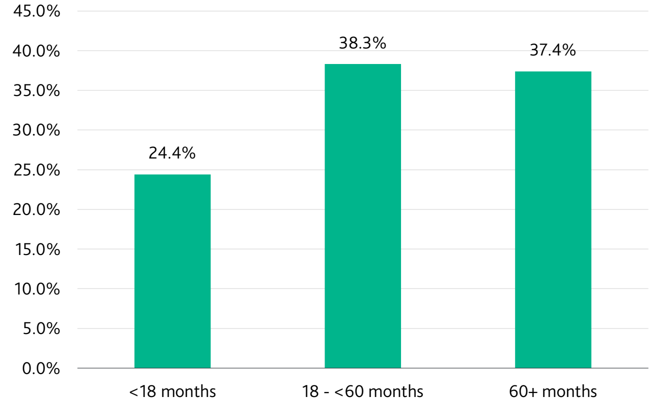


EXHIBIT L

Seasoning



Qualitative Collateral Information

All cover pool characteristics are actual levels (rather than assumed levels) based on reports from LBBW.

Appendix 2: Income Underwriting and Valuation

A.	**Residential Income Underwriting**	
1	Is income always checked?	Yes. Within the credit check required by law, debt service capacity is verified; this always also requires a check of the income. Exceptions apply to overdraft facilities, cash loans, credit cards and in connection with sales finance
2	Does this check ever rely on income stated by borrower ("limited income verification") income stated by the borrower?	No. Information given by the borrower has always to be verified for traceability and conclusiveness to prevent false data. Requirements for the disclosure of economic circumstances according to § 18 KWG are unaffected hereof.
3	Percentage of loans in Cover Pool that have limited income verification	n/a (please refer to 2.)
4	If limited income verification loans are in the Cover Pool, describe what requirements lender has in place for these loans.	n/a (please refer to 2.)
5	Does income in all cases constrain the amount lent (for example through some form of Income Sufficiency Test ("IST").	Yes. Within the credit check required by law, debt service capacity is tested; in this context, earnings and expenses are compared with the aim of a revenue surplus. Exceptions are granted only in justified cases.
6	If not, what percentage of cases are exceptions.	n/a
For the purposes of any IST		
7	Is it confirmed income after tax is sufficient to cover both interest and principal.	please refer to 5.
8	If so over what period is it assumed principal will be paid (typically on an annuity basis)? Any exceptions?	For annuities, a repayment of at least 2% p.a. (plus saved interests) is implied; in exceptional cases, the duration can be identical with the remaining life of the object financed.
9	Does the age of the borrower constrain the period over which principal can be amortised?	No.
10	Are any stresses made to interest rates when carrying out the IST? If so when and for what type of products?	Yes. Within the credit check required by law, a fictitious debt service is calculated with an interest rate of 7%; bullet loans with substitutional amortisation (e.g. mutual funds) require a calculated debt service with an interest rate of 10%.
11	Are all other debts of the borrower taken into account at point loan made?	Yes, they are taken into account in the calculation of the debt service capacity within the credit check required by law (please refer to 5.)
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 tact)	The calculation of living expenses is based on data given by the borrower. The plausibility of this information is verified with internal historical experience data. In case of doubt, the higher value of both is taken in account. This calculation is always based on post tax income
Other comments		None

B.	**ResidentialValuation**	
1	Are valuations based on market or lending values?	Both market and lending values are calculated; in the cover pool, only lending values are used
2	Are all or the majority of valuations carried out by external (with no direct ownership link to any company in the Sponsor Bank group) valuers?	Germany: No, but internal valuers are always independent from the lending decision process Foreign countries: n/a
3	How are valuations carried out where external valuer not used?	By internal valuers who are not involved in the lending decision process. Concerning small loans acc. to § 24 BelWertV, valuation is carried out with assistance of an automated program always considering the latest local market- and infrastructure data
4	What qualifications for external valuers require?	Germany: HypZert, DIA, öffentlich bestellter und vereidigter Sachverständiger or RICS Foreign countries: depends on the country (for example RICS, MAI or Certified Valuers)
5	What qualifications do internal valuers require?	Germany: perennial experience in Real Estate Valuation, DIA, RICS, MAI or HypZert (S or F) Foreign countries: perennial experience in Real Estate Valuation, HypZert (M), RICS or MAI
6	Do all external valuations include an internal inspection of a property?	All external valuations require an inspection of the property (inside and outside) by the assigned valuer; the inspection has to be documented in the appraisal.
7	What exceptions if any?	Property has been already visited by the valuer in conjunction with former valuations and no structural alteration has taken place in the meantime.

B. ResidentialValuation	
8 Do all internal valuations include an internal inspection of a property?	Yes
9 What exceptions if any?	Germany: Property has been already visited by the valuer in conjunction with former valuations and no structural alteration has taken place in the meantime Foreign countries: i) The property has been visited and documented by an external valuer; ii) Property has been already visited by the valuer in conjunction with former valuations and no structural alteration has taken place in the meantime.
Other comments	None

C. Commercial Lending	
1. Business Focus	
1.1 What kind of CRE loans will form part of the cover pool?	Almost exclusively existing property loans.
1.2 What CRE property types do you finance?	Main property types are office, residential, retail and selected logistics. No financing of hotels, care homes or other specialized and operator-run properties. An exception could be the latter types of use as a small part of a diversified portfolio with main usage in office, residential or retail.
1.3 What kind of restrictions do you have in terms of property location and quality	New business only in Germany, USA and UK. Focus is on Class A properties, in USA and UK only in top-tier metropolitan areas. For open-ended-funds (regulated by the German KAGB) also top-objects in other regions are financed (there the funds-assets serve as collateral)
1.4 Does the cover-pool only contain self-originated loans or loan participations (e.g. syndicated loans, mezzanine loans)?	About 85% self-originated loans, 15% loan participations, no mezzanine loans.
2. Loan underwriting policy	
2.1 Do you accept loans with refinancing risk? If yes, do you have a maximum Exit-LTV limit at loan maturity?	Conservative lending standards. Another important risk figure is the debt yield (see 2.3). Bullet repayments though are customary in the CRE market.
2.2 Do you have a maximum LTV ratio that is covenanted in the loan agreement? Do max. LTV ratio vary by property type? Please specify.	Typically a running LTV covenant is part of our standard loan agreement. No variations in max. LTV ratio due to property types as per 1.2. In the commercial real estate business, the general target value of LTV is <= 60%. For the so-called regional real estate business a LTV <=75% is the target value. A sufficient debt yield however is more important than the LTV given (in some markets) purchase prices of (significantly) more than 20 times the rent
2.3 Do you have a minimum DSCR ratio that is covenanted in the loan agreement? Do min. DSCR ratio vary by property type? Please specify.	The underwriting standard in New Business requires a minimum debt yield of 7% (given a debt service of 2.5% this equals a DSCR of close to 300%) during the term of loan for all property types as per 1.2. In times of very low interest rates from a risk point of view a debt yield covenant makes much more sense than a DSCR covenant.
2.4 Do you always require full hedging in terms of interest rate and currency risk? If not, which stresses are used to calculate the DSCR ratios?	Currency risk is not accepted. Typically a hedging of interest rate is required. Debt service ratio with minimum 7% on basis LBBW valuation.
2.5 Do you require a minimum exit debt yield? Please specify	Please see 2.1, 2.3 .and 2.4
2.6 Do you allow exceptions to and what reasons would justify exceptions?	Yes, in exceptional cases depending on structure of transaction and additional collateral deviations are accepted. The average debt yield of the loan book of some 9.3% nevertheless gives an indication of LBBW's strict risk policy
3. Cash flow analysis	
3.1 Is a cash-flow assessment always carried out?	Yes
3.2 Do you consider in the DSCR calculation (cash-flow assessment) possible reduction in property cash flow (e.g. due to lease roll-over, changing market rents, capex requirements)?	Yes, the DSCR is under ongoing monitoring
3.3 Do you rely in the DSCR calculation (cash-flow assessment) on possible increases in property cash flow (e.g. due to expected reduction in property vacancy, rent increase, property disposal income, or sponsor support)?	We do not rely on this, but at the same time, we include this into our considerations to reach a cautious/realistic approach
3.4 Do you consider in the cash flow assessment the quality (tenant) and diversity of cash flows? How do you assess tenant quality?	Tenant quality is assessed by reviewing the rental agreement and structure of tenants. The creditworthiness of tenants is part of the customer's rating.
3.5 How often is the property cash flow and loan DSCR assessment updated?	Minimum once a year within the monitoring report, otherwise as agreed in the loan agreement on quarterly or semi annual basis.
4. Borrower	
4.1 Do you accept SPV as a borrower?	SPVs are customary in the CRE market. SPVs financed by LBBW are bankruptcy remote and include a full recourse to the borrower entity.

4.2 Do you always require direct recourse to the borrower and sponsor (natural person) holding the equity stake? If not, please provide details/limits on non-recourse business.	In general loans have a structure ensuring a full recourse to the borrower but usually (market standard) no direct recourse to the sponsor.
4.3 Do you have minimum requirements as for the borrower's quality? Please detail.	Yes, customer rating with maximum PD of 1.32%. Average PD of new business in commercial real estate in 2015 was 0.22%. Vast majority of borrowers has institutional quality and is highly professional.
4.4 How do you assess borrower's quality?	Track record, references
4.5 Do you allow exceptions to 4.3? What reasons would justify exceptions?	No

D.	**CommercialValuation**	
1	Are valuations based on market or lending values?	On both
2	Do you consider vacant possession values for single-tenanted properties?	Depends on the individual case
3	Do valuations always comply with standards of the RICS Red Book?	Germany: no, they comply with standards of the BelWertV and the ImmoWertV Foreign countries: Yes (GB: Red Book), in other countries they comply with the typical standards of the Country where the property is located (USA: USPAP, Europe: EVS - Blue Book, IVS and so on)
4	Do you always require that valuations include a review of the lease contracts, a technical report and environment report?	Yes, if possible
5	Do you always require that valuations provide reference to comparable recent property transactions?	Yes, if data is available
6	Could the value of a property portfolio exceed the value of the individual properties?	No
7	How often is the property value updated and how often is checked that the LTV covenant is not breached? (annually, ad-hoc, depending on general market movement)?	Germany: Updates take place at least once in three years if the value is > 5 million €. If the general market movement makes it necessary, updates take place ad-hoc. Foreign countries: Updates take place at least once in two years. In general the LTV covenant has to be checked by the credit analyst and not by the valuer.
Other comments		None

Source: LBBW

Moody's Related Research

For a more detailed explanation of Moody's approach to this type of transaction as well as similar transactions please refer to the following reports:

Rating Methodology:

» Moody's Approach to Rating Covered Bonds, August 2015 (SF412595)

Special Comments:

» EU Bank Recovery and Resolution Regime Strengthens German Covered Bonds and Improves Their Ratings, July 2015 (1006468)

» Moody's Global Covered Bonds Monitoring Overview: Q3 2015, March (1018320)

» Structural Protection Mechanisms for Non-EEA Assets in German Cover Pools, July 2014 (SF374519)

» Germany – Legal Framework Covered Bonds, August 2015 (1006760)

» European Covered Bond Legal Frameworks: Moody's Legal Checklist, German Translation, January 2006 (SF67969)

» European Covered Bond Legal Frameworks: Moody's Legal Checklist, December 2005 (SF66418)

Performance Overview:

» Landesbank Baden-Wuerttemberg - Mortgage covered bonds, April 2016 (SF429939)

Credit Opinion:

» Landesbank Baden-Wuerttemberg

Webpage:

» www.moodys.com/coveredbonds

To access any of these reports, 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.

1 A CB anchor event occurs when the issuer, or another entity in the issuer group that supports the issuer, ceases to service the debt obligations under the covered bonds.

2 See "Germany – Legal Framework Covered Bonds", published August 2015 (see Related Research).

3 A CB Anchor Event is defined as removal, from the cover pool, of (1) support provided by entities within the issuer; (2) ancillary activities of the issuer (i.e., those not related to the cover pool); and usually (3) management functions of the issuer.

4 Moody's Approach to Rating Covered Bonds, published August 2015 (see Related Research).

5 The collateral score can be seen as the amount of risk-free enhancement required to protect a Aaa rating from otherwise unsupported assets. Therefore, the stronger the credit quality of the collateral, the lower the collateral score. This only considers the credit deterioration of the assets and ignores any market risk (see Rating Methodology Moody's Approach to Rating Covered Bonds, published August 2015 (see Related Research).

6 Please see Related Research: "Structural Protection Mechanisms for Non-EEA Assets in German Cover Pools", published in July 2014.

7 Please see Related Research: "Moody's Approach to Rating Covered Bonds", published in August 2015.

8 See Moody's Approach to Rating Covered Bonds, published August 2015.

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