

CREDIT OPINION

12 January 2017

New Issue

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2017

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Aareal Bank AG Mortgage Covered Bonds

German Covered Bonds

Ratings

Cover Pool (€)	Ordinary Cover Pool Assets	Covered Bonds (€)	Rating
12,430,021,924	Commercial Mortgage Loans	9,635,555,248	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.

Summary Rating Rationale

We have assigned definitive long-term ratings of Aaa to the covered bonds issued under the mortgage covered bond programme (*Hypothekendarlehen*) of Aareal Bank AG (Aareal Bank or the issuer; deposits A3; adjusted baseline credit assessment baa3; counterparty risk (CR) assessment A3(cr)). The covered bonds are governed by the German *Pfandbrief Act*. The covered bonds are full recourse to the issuer and secured by a pool of assets (cover pool) consisting of commercial mortgage loans (93%) backed by properties located in a number of different markets with major concentrations in the US, Germany, the UK and France and supplementary assets (7%). We have assigned a TPI of High to the covered bonds.

The rating takes into account the following factors:

- » The credit strength of Aareal Bank (CR assessment A3(cr)).
- » The cover pool's credit quality, which is reflected in the collateral score of 8.1%, and the current over-collateralisation (OC) of 32.2% (on an unstressed present value basis) as of 30 September 2016.
- » The support provided by the German legal framework for *Pfandbriefe*.
- » Liquidity: The *Pfandbrief Act* requires issuers to cover, for a period of 180 days, any surplus of expected outflows over inflows by liquid supplementary assets. In addition, the minimum 2% statutory OC must also be provided by liquid supplementary assets.

Credit Strengths

- » *Recourse to the issuer*: The covered bonds are full recourse to Aareal Bank (A3(cr)). See Covered Bonds Analysis.
- » *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. For

more details on the German *Pfandbrief* Act, see [Germany - Legal Framework for Covered Bonds](#).

- » *The credit quality of the cover pool*: The covered bonds are supported by a cover pool of high-quality assets. Most of the assets are commercial loans backed by properties located in a number of different markets with major concentrations in the US, Germany, the UK and France. The collateral quality is reflected in the collateral score, which is currently 8.1%. See Cover Pool Analysis.
- » *Refinancing risk*: Following what we call a covered bond (CB) anchor event, refinancing risk is mitigated by a well-established and deep market for German *Pfandbriefe*, as well as the liquidity matching requirements. A CB anchor event occurs when the issuer, or another entity in the issuer group that supports the issuer, ceases to service the payments on the covered bonds. See Covered Bonds Analysis.
- » *Interest rate and currency risks*: Interest rate and currency exchange rate risk is mitigated by the *Pfandbrief* Act's 2% overcollateralisation (OC) requirement, which has to be maintained under stressed assumptions (e.g. yield curve movements, changes in the relevant exchange rates) that are applied to interest rate and exchange rate risks that are not hedged. See Covered Bonds Analysis.
- » *Liquidity*: The programme does not benefit from any designated liquidity reserve if cash flow collections are interrupted. The *Pfandbrief* Act requires issuers to cover, for a period of 180 days, any surplus of expected outflows over inflows by liquid supplementary assets. See Covered Bonds Analysis.
- » *Provisions for a cover pool administrator*: Following an issuer default, the covered bondholders will benefit from a cover pool administrator (*Sachwalter*) that acts independently from the issuer's insolvency administrator. For more details on the German *Pfandbrief* Act, see [Germany Legal Framework for Covered Bonds](#).

Credit Challenges

- » *High level of dependency on the issuer*: As with most s, 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 s with varying promises, and enter into new hedging arrangements. As with most s in Europe, there are few restrictions on the future composition of the cover pool. These changes could affect the cover pool's credit quality as well as the overall refinancing risk and market risks. The issuer has the ability, but not the obligation, to increase the over-collateralisation in the cover pool. See Structural Analysis.
- » *Interest rate and currency risk*. 39.2% of the cover assets are denominated in other currencies than EUR. This currency risk is mainly hedged via derivatives in the cover pool while, in addition, 8.4% of the s outstanding are denominated in USD and GBP and provide a natural hedge for this portion of the currency risk. Currently only a minor portion of the currency risk is not hedged. See s Analysis.
- » *Cover pool concentration*: The cover pool has the following concentrations: (1) geographical concentration: 63.8% of the loans in the cover pool are secured by properties located in four countries: USA, Germany, the UK and France; (2) property types: office (35.5%), retail (28.0%) and hotel properties (15.6%) represent 79.0% of the total assets that secure the cover assets. (3) obligor concentration: the 10 largest obligors account for 13.1% of the commercial mortgage loans. See Cover Pool Analysis.
- » *Market risks*: Following a CB anchor event, holders may need to rely on proceeds being raised through the sale of, or borrowing against, cover pool assets in order to make timely payments of principal on the bonds. Following a CB anchor event, the market value of these assets may be subject to high volatility. Further, holders 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. See Covered Bonds Analysis.

This publication does not announce a credit rating action. For any credit ratings referenced in this publication, please see the ratings tab on the issuer/entity page on www.moody's.com for the most updated credit rating action information and rating history.

- » *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. See Covered Bonds Analysis.
- » *Liquidity*: The programme does not benefit from any designated liquidity reserve if cash flow collections are interrupted. However, the Pfandbrief act requires certain minimum liquidity arrangements. See Covered Bonds Analysis.

Key Characteristics

Exhibit 2

Covered Bonds Characteristics

Issuer:	Aareal Bank
Covered Bond Type:	Mortgage Covered Bonds
Issued under Covered Bonds Law:	German Pfandbrief Act
Applicable Covered Bonds Law:	German Pfandbrief Act (Hypothekentpfandbriefe)
Entity used in Moody's EL and TPI analysis	Aareal Bank
CR Assessment:	A3(cr)
CB Anchor:	CR assessment +1 notch
Senior unsecured/deposit rating:	Baa1/A3
Total Covered Bonds Outstanding:	€ 9,635,555,248
Main Currency of Covered Bonds:	EUR (91.6%), USD (8.2%), GBP (0.2%)
Extended Refinance Period:	No
Principal Payment Type:	Bullet
Interest Rate Type:	Fixed rate covered bonds (85.7%), variable rate covered bonds (14.3%)
Committed Over-Collateralisation:	2.0%
Current Over-Collateralisation:	32.2%
Intra-group Swap Provider:	No
Monitoring of Cover Pool:	Cover pool monitor (Treuhand)
Trustees:	n/a
Timely Payment Indicator:	High
TPI Leeway:	2

Source: Moody's Investors Service

Exhibit 3

Cover Pool Characteristics

Size of Cover Pool:	€ 12,430,021,923
Main Collateral Type in Cover Pool:	Commercial mortgage loans (93%)
Main Asset Location of Ordinary Cover Assets:	USA (19.2%)
Main Currency:	EUR (60.8%)
Loans Count:	706
Number of Borrowers:	681
Concentration of 10 Biggest Borrowers:	13.1%
Average exposure to borrowers:	€ 16,967,829
WA unindexed LTV (based on annually updated market values):	57.7%
WA Seasoning:	57 months
WA Remaining Term:	40 months
Interest Rate Type:	Fixed rate loans(37.7%), floating rate loans (62.3%)
Collateral Score:	8.1%
Cover Pool Losses:	19.7%
Further Cover Pool Details:	See Appendix 1
Pool Cut-off Date:	30 September 2016

Source: Moody's Investors Service

Covered Bond Overview

The covered bonds benefit from recourse to both the issuer and the cover pool, as well as the legal framework under the *Pfandbrief* Act. Our rating reflects these features.

Covered Bond Description

The covered bonds issued under the mortgage covered bond programme of Aareal Bank are full recourse to the issuer. Upon occurrence of a CB anchor event, covered bondholders will have access to a cover pool of mortgage loan receivables.

Structure Description

THE BONDS

All outstanding covered bonds have a 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 interests on the covered bonds.

RECOURSE TO COVER POOL AND OVER-COLLATERALISATION

If the issuer becomes insolvent, the covered bondholders will 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 30 September 2016, based on an outstanding issuance of 9.6 billion euro, the over-collateralisation in the cover pool is currently 32.2% on an unstressed present value basis of which the issuer provides 2% on a "committed" basis. The minimum OC level consistent with the Aaa rating is 14.5%, of which the issuer should provide 2% in a "committed" form (numbers in present value terms). These numbers show that Moody's is relying on "uncommitted" OC in its expected loss analysis.

Although the issuer has the ability to increase the OC in the cover pool should the collateral quality deteriorate or market risks rise, 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 German *Pfandbrief* legislation. There are a number of strengths in this legislation, which include *inter alia* the following: (i) the issuer is regulated and supervised by the Financial Supervisory Authority of Germany (*Bundesanstalt für Finanzdienstleistungsaufsicht* or *BaFin*); (ii) if the issuer becomes insolvent, the covered bondholder will have a priority claim over a pool of assets (the cover pool); (iii) the *Pfandbrief* Act sets out strict eligibility criteria for cover pool assets; (iv) the issuer must maintain a minimum OC of 2% on a stressed present value basis; (v) the cover pool 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; (vi) an independent cover pool monitor (*Treuhänder*) is responsible for monitoring various cover pool operations. No specific structural features beyond the statutory requirements are implemented for Aareal Bank's mortgage covered bond programme. see [Germany Legal Framework for Covered Bonds](#).

Covered Bonds 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 will be made in a timely fashion following a CB anchor event, which we measure using the Timely Payment Indicator, explained further below.

Primary Analysis

ISSUER ANALYSIS

Credit quality of the issuer: The issuer's CR assessment is A3(cr). For a description of the issuer's rating drivers, please see our [Credit Opinion, published January 2017](#) (see Moody's related research).

As a starting point for our analysis we use what we call the "CB anchor," which for covered programmes under an EU covered bond law is the CR assessment plus one notch. From the CB anchor we derive the probability for a CB anchor event to occur. Upon occurrence of a CB anchor event, payments on the covered bonds would need to be made from cash flows collected from the cover pool assets.

Dependency on the issuer's credit quality: The credit quality of the covered bonds are primarily dependent on the credit quality of the covered bonds issuer. Should the issuer's credit strength 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 decrease.

In case of deterioration of the CB anchor, 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 negative rating actions.

Reasons for the high level of linkage 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, issue further bonds and enter new hedging arrangements. Such actions could negatively affect the value of the cover pool.

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 [Moody's Approach to Rating Covered Bonds](#)).

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

- » The covered bond framework: Upon issuer default, or earlier if *BaFin* considers it necessary, a cover pool administrator (*Sachwalter*) will take over management responsibility of the covered bond programme. 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 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 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.
- » The high credit quality of the cover pool, which is reflected in the collateral score. A higher credit quality of the cover pool will lead to a lower write-off for losses and lower refinancing margins applied, all other variables being equal.

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 have a hard bullet repayment with no extension period, which is typical for German *Pfandbrief* programmes.
- » The relatively large portion of cover assets that are not denominated in euros, together with the heavy usage of swaps to hedge exchange rate and interest rate risk might make it more complicated to manage this programme in case of issuer default than other German mortgage covered bond programmes.

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.

Exhibit 4

Overview Assets and Liabilities

	WAL Assets (Years)	WAL Liabilities (Years)	Assets (%)	Liabilities (%)
Fixed rate	4.6	4.9	37.7%	85.7%
Variable rate	2.4	1.9	62.3%	14.3%

WAL = weighted-average life

Source: Aareal Bank AG

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 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 Moody's Approach to Rating Covered Bonds).

Aspects of this covered bond programme that are interest rate and currency mismatch-positive include:

- » Market risk in respect of interest rate and currency exchange rate risks are managed by the usage of swaps.
- » The requirement that *Pfandbrief* issuers must regularly run stress tests regarding unhedged interest rate and foreign-exchange risks. Aareal Bank opted for a dynamic stress test, which includes a parallel movement of the interest rate curve by at least 100 basis points; according to the *Pfandbrief* legislation for exchange rate risk, the approach also includes a stress test run by the issuer, in order to meet mandatory stress test 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.
- » The relatively large exposure to currency risk and the usage of swaps lead to a generally higher exposure to market risk also due to counterparty risks. We consider it a positive in this respect that all cover pool swaps with a positive market value for Aareal Bank are collateralised by the counterparty in any case.

TIMELY PAYMENT INDICATOR

Our Timely Payment Indicator (TPI) 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. We have assigned a TPI of High to these covered bonds, in line with the other mortgage covered bonds issued under the German *Pfandbrief* Act.

TPI-positive aspects of this covered bond programme include:

- » The high level of government and financial market support provided to *Pfandbriefe* in Germany
- » The strength of the German *Pfandbrief* legislation, including:
 - At the time of the declaration of the 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 cover pool administrator 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 mortgage 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 8.1%.

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.

Based on the current TPI of High, the TPI Leeway for this programme is two notches. Therefore, a downgrade of the CB anchor by more than two notches could lead to a downgrade of the covered bonds, all other variables being equal.

Additional Analysis

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 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. We understand that Aareal Bank has included set-off waiver clauses in their standard loan contracts which mitigate this risk.
- » Loans to borrowers located outside the European Economic Area (EEA). In addition to the above risk, we understand that cover pool assets outside the EEA may not be available to covered bondholders on a priority basis because other (unsecured) creditors of the issuer may successfully access the assets included in the cover pool. This may, due to secondary insolvency proceedings being commenced under the respective domestic law, result in lower recovery. As of the cut-off date, the majority of the loans included in the cover pool and located outside of the EEA are protected against the risk described above by the inclusion in trust structures that are designed to protect the covered bondholders' priority claim regarding these assets. For those loans located outside the EEA and not protected by trust structures (1.2% of total cover assets) we model additional legal risks that we show as part of the market risk in our risk metrics.

LIQUIDITY

The covered bonds do not benefit from any designated liquidity reserve if cash flow collections are interrupted. However, in order to maintain a minimum liquidity and to allow for timely payment to bondholders, the *Pfandbrief* Act requires issuers to cover, for a period of 180 days, any surplus of expected outflows over inflows by liquid supplementary assets (so-called 180-day rule). In addition, the minimum 2% statutory OC must be provided by liquid supplementary assets. In our opinion, these requirements make it very likely that timely payment on covered bonds will be possible after issuer default. Nevertheless, these requirements do have weaknesses because (1) liquid assets usually consist of bonds that in case of stress need to be sold to generate cash and (2) the 180-day rule gives credit to expected payments received from cover assets during the next 180 days without considering payments in arrears and payment defaults in a situation of stress.

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

Comparables

Exhibit 5

PROGRAMME NAME	Aareal Bank AG - Mortgage Covered Bond Programme	Deutsche Hypothekenbank (Actien Gesellschaft) - Mortgage Covered Bond Programme	Landesbank Baden-Wuerttemberg - Mortgage Covered Bond Programme	Berlin Hyp 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	€ 9,635,555,248	€ 8,363,264,790	€ 10,433,258,303	€ 11,710,375,586
Total assets in the Cover Pool	€ 12,430,021,924	€ 8,755,968,035	€ 15,327,176,419	€ 12,789,327,158
Issuer name	Aareal Bank AG	Deutsche Hypothekenbank (Actien-Gesellschaft)	Landesbank Baden-Wuerttemberg	Berlin Hyp AG
Issuer CR assessment	A3(cr)	A3(cr)	Aa3(cr)	A1(cr)
Group or parent name	n/a	n/a	n/a	Landesbank Berlin Holding AG
Group or parent CR assessment	n/a	n/a	n/a	0
Main collateral type	Commercial	Commercial	Residential	Commercial
Collateral types	Commercial 84.1%, Multi-Family 8.9%, Other/Supplementary assets 7.0%	Commercial 76.9%, Multi-Family 12.1%, Other/Supplementary assets 10.8%, Residential 0.2%	Commercial 51%, Residential 47%, Other/Supplementary assets 2%	Commercial 61.8%, Multi-Family 28.9%, Other/Supplementary assets 8.8%, Residential 0.4%
Ratings				
Covered bonds rating	Aaa	Aa1	Aaa	Aaa
Entity used in Moody's EL & TPI analysis	Aareal Bank AG	Deutsche Hypothekenbank (Actien-Gesellschaft)	Landesbank Baden-Wuerttemberg	Berlin Hyp AG
CB anchor	CR Assessment + 1 notch	CR Assessment + 1 notch	CR Assessment + 1 notch	CR Assessment + 1 notch
CR Assessment	A3(cr)	A3(cr)	Aa3(cr)	A1(cr)
SUR	Baa1	Baa1	A1	A2
Unsecured claim used for Moody's EL analysis	Yes	Yes	Yes	Yes
Value of Cover Pool				
Collateral Score	8.1%	9.5%	9.5%	10.5%
Collateral Score excl. systemic risk	n/a	n/a	n/a	n/a
Collateral Risk (Collateral Score post-haircut)	5.4%	6.4%	6.4%	7.1%
Market Risk	14.3%	11.4%	12.8%	8.7%
Over-Collateralisation Levels				
Committed OC	2.0%	2.0%	2.0%	2.0%
Current OC	32.2%	13.6%	56.2%	7.3%
OC consistent with current rating	14.5%	4.5%	1.0%	5.0%
Surplus OC	17.7%	9.1%	55.2%	2.3%
Timely Payment Indicator & TPI Leeway				
TPI	High	High	High	High
TPI Leeway	2	3	5	4
Reporting date	30 September 2016	30 September 2016	30 June 2016	30 September 2016

Source: Moody's Investors Service

Cover Pool Overview

The cover pool consists of commercial mortgages backed by commercial real estate and further cover assets which constitute substitute assets.

Following a CB anchor event, we determine the value of the cover pool, and therefore any losses, assuming a stressed environment.

Cover Pool Description

Pool Description as of 30 September 2016

The cover pool consists of commercial mortgages backed by commercial real estate (93%) and further cover assets (7%) which constitute substitute assets under the *Pfandbrief Act*. The majority of the regular cover assets are backed by properties located in a number of different markets with major concentrations in the US, Germany, the UK and France. The substitute assets are mainly claims against German regional governments, the German federal government and multi-national banks.

On a nominal value basis, the cover pool assets total 12.4 billion euro, which are backing 9.6 billion euro covered bonds. The OC level reported on an unstressed NPV basis is 32.2%.

Commercial Mortgage Loans

The majority of the regular cover assets are backed by properties located in a number of different markets with major concentrations in Germany, the US, the UK and France.

The ten largest obligors account for 13.1% of the commercial mortgage loans and the average loan balance of the commercial mortgage loans is EUR 16,366,985. About 80.9% of the pool loans are granted to SPV's, 14.7% are granted to non-SPV corporate borrowers and 3.4% are loans to fund borrowers.

99.96% of the assets are reported as performing.

Exhibits 6 to 15 below show more details about the cover pool characteristics.

Exhibit 6

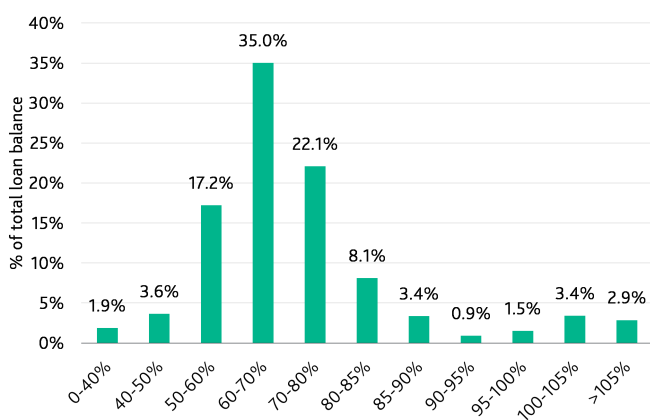
Cover Pool Information

Overview		Specific Loan and Borrower characteristics	
Asset type:	Commercial	Bullet loans (based on whole loan):	44.3%
Asset balance:	11,555,091,366	Loans in non-domestic currency:	39.2%
Average loan balance:	16,967,829	Percentage of fixed rate loans:	37.7%
Number of loans:	706		
Number of borrowers:	681	Performance	
Number of properties:	1,879	Loans in arrears \geq 2 months:	0.0%
Largest 10 borrowers:	13.1%	Loans in a foreclosure procedure:	0.0%
WA remaining term (in years):	3.3		
WA seasoning (in years):	4.7	Details on LTV	
Main countries:	USA (19.2%)	WA current whole-loan LTV (based on property market value) :	57.7%
	Germany (18.7)	Valuation Type	Market Value
	UK (13.7%)	LTV Threshold (lending value):	60%

Source: Aareal Bank

Exhibit 7

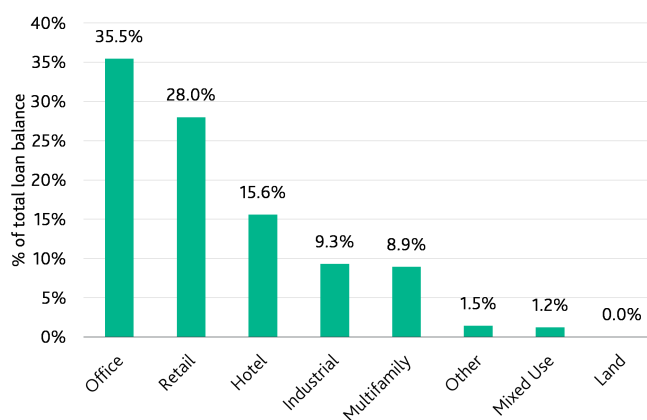
LTV Distribution based on property market values



Source: Aareal Bank

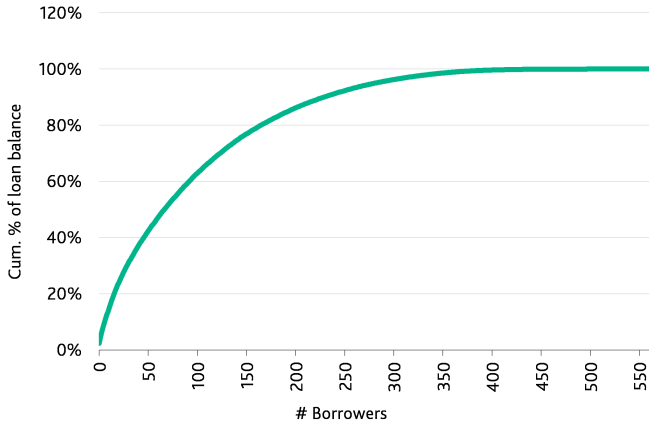
Exhibit 8

Property Type



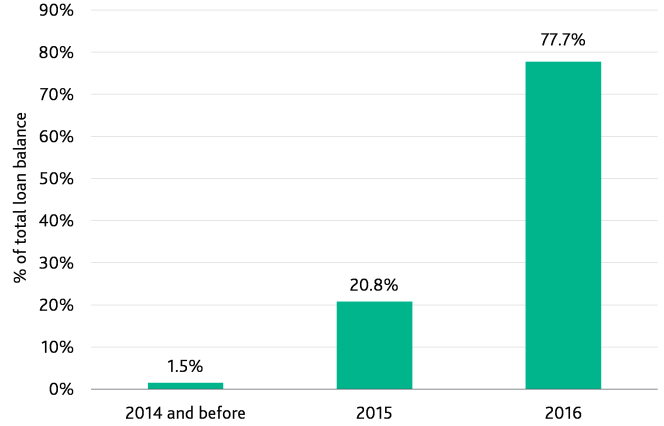
Source: Aareal Bank

Exhibit 9
Borrower Concentration



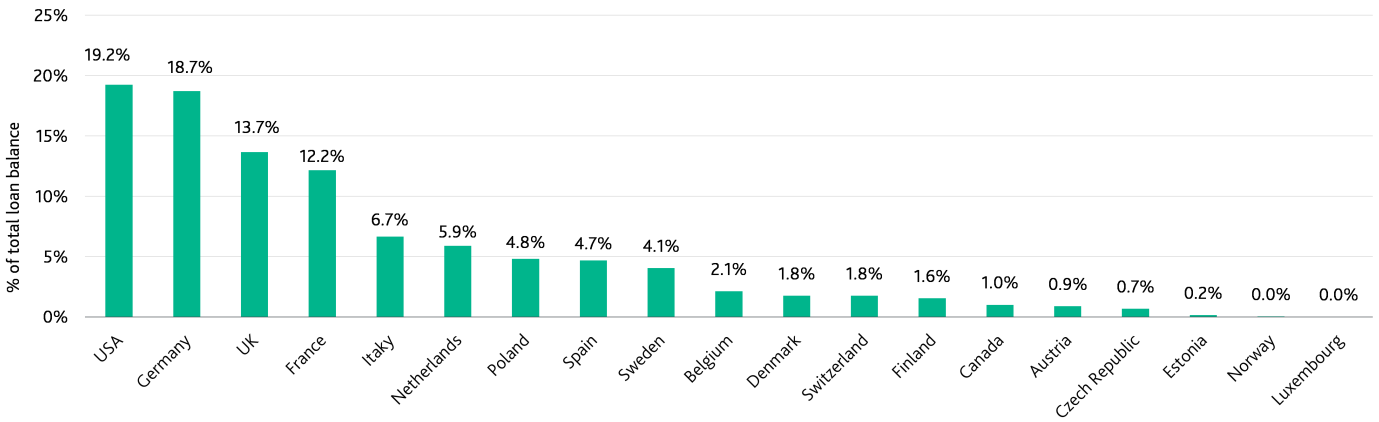
Source: Aareal Bank

Exhibit 10
Year of Property Valuation



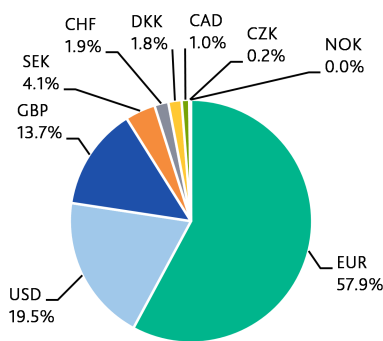
Source: Aareal Bank

Exhibit 11
Country Distribution



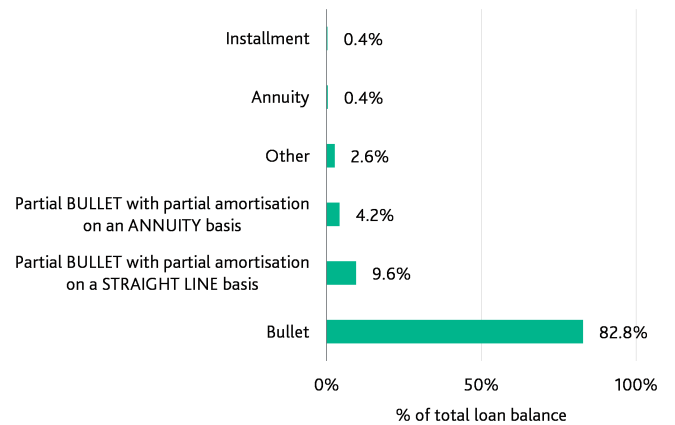
Source: Aareal Bank

Exhibit 12
Currency Distribution



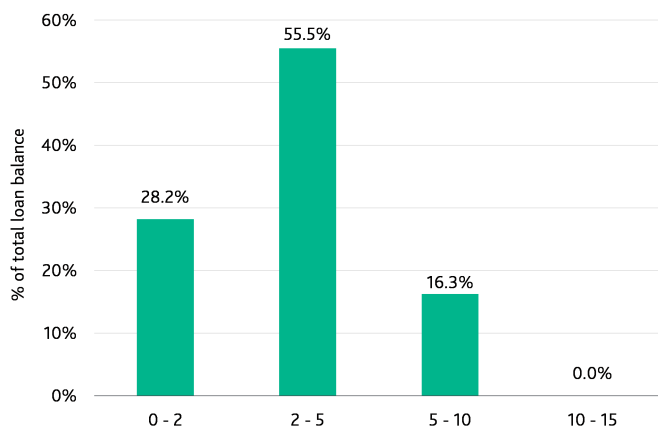
Source: Aareal Bank

Exhibit 13
Repayment Type
based on loan portion in cover pool



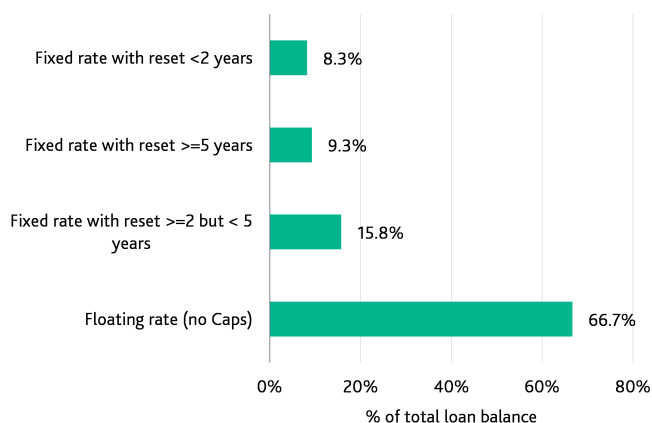
Source: Aareal Bank

Exhibit 14

Remaining Term in years

Source: Aareal Bank

Exhibit 15

Interest Rate Type

Source: Aareal Bank

SUBSTITUTE ASSETS

868.3 million euro of the cover assets (7.0%) are substitute assets. In the case of Aareal Bank the substitute assets currently consist of claims against German regional governments, the German federal government and multi-national banks.

Substitution

Exposure to decisions made by the issuer in its discretion as manager of the cover pool creates additional risk. For example, before a CB anchor event, the issuer may remove assets from the cover pool and/or add new assets to the cover pool. Such actions could negatively affect 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, creating substitution risk. Nevertheless, cover pool quality over time will be protected by, among others, the requirements of the German *Pfandbrief* Act, which specify what types of assets are eligible (see [Germany Legal Framework for Covered Bonds](#)).

Cover Pool Monitor

Pursuant to the German *Pfandbrief* Act, a cover pool monitor (*Treuhänder*) has been appointed to monitor the various day-to-day operations with respect to the cover pool. For more details on the cover pool monitor's role, see [Germany Legal Framework for Covered Bonds](#).

Cover Pool Analysis

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

For this programme, the collateral score of the current pool is 8.1%, comparable to the average collateral score observed in other German mortgage covered bonds (see Moody's Global Covered Bonds Monitoring Overview).

Commercial Cover Pool Analysis

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

- » From a credit perspective, Moody's views the following characteristics as positive:
 - 99.96% of the commercial mortgage loans are performing and not in arrears as of the cut-off date of this report.
 - The properties are located in a number of different jurisdictions which results in a comparatively lower regional concentration than in other rated German programmes.

- The loans in the cover pool have a relatively low LTV (weighted average LTV is 57.7% based on property market values).
- » From a credit perspective, Moody's views the following characteristics as negative:
 - The cover pool consists of an international portfolio of commercial mortgage loans backed by properties in a number of a jurisdictions. On the positive side, this characteristic provides a diversification benefit while on the negative side, the cover pool is exposed to the credit risk of a wide range of property markets, including a relatively large portion of hotel properties (15.6%) which represent a special property type.
 - Borrower concentration: the cover pool consists of mortgages loans to 681 borrowers, of which the 10 largest borrowers represent 13.1% of the aggregated amount of commercial mortgage loans.

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 December 2016. 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 could negatively affect the ratings or, in some cases, our ability to continue to rate the covered bonds.

Moody's Related Research

Rating Methodology

- » [Moody's Approach to Rating Covered Bonds, December 2016 \(1044142\)](#)

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: Q2 2016, November 2016 \(PBS_1039127\)](#)
- » [Structural Protection Mechanisms for Non-EEA Assets in German Cover Pools, July 2014 \(SF374519\)](#)
- » [Germany – Legal Framework for Covered Bonds, August 2015 \(1006760\)](#)
- » [European Covered Bond Legal Frameworks: Moody's Legal Checklist, December 2005 \(SF66418\)](#)

Credit Opinion

- » [Aareal Bank AG](#)

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.

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