MOODY'S INVESTORS SERVICE

CREDIT OPINION
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Update

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ING-Diba AG - Mortgage Covered Bonds

Update to New Issue Report, reflecting data as of June 30, 2019 – German covered bonds

Ratings

Exhibit 1

Cover Pool (€)	Ordinary Cover Pool Assets	Covered Bonds (€)	Rating
4,846,918,814	Residential Mortgage Loans	3,705,000,000	Aaa

Source: Moody's Investors Service

Summary

The covered bonds issued by ING-DiBa AG (ING-DiBa or the issuer, Aa2(cr)) under the ING-Diba AG - Mortgage Covered Bonds programme are full recourse to the issuer and are secured by a cover pool of assets consisting mostly of residential mortgage loans (94.8%) in Germany.

Credit strengths include the full recourse of the covered bonds (*Hypothekenpfandbriefe* or covered bonds) holders to the issuer and support provided by the German legal framework for *Pfandbriefe*, which provides for the issuer's regulation and supervision.

Credit challenges include the high level of dependency on the issuer. As with most covered bonds in Europe, there are few restrictions on the future composition of the cover pool. The cover pool also has geographical concentration risks.

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 40.1% (on an unstressed net present value basis) as of 30 June 2019.

Credit strengths

» ***Recourse to the issuer***: The covered bonds are full recourse to ING-DiBa AG (Aa2(cr)). (See "Covered bond 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. (See "Moody's related publications: Covered Bond Legal Frameworks")

» ***High credit quality of the cover pool***: The covered bonds are supported by a granular cover pool of high-quality assets. Most of the assets are mortgage residential loans backed by properties in Germany. 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 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). ING-DiBa opted for the so-called "dynamic approach". This includes a parallel movement of the interest-rate curve by at least 100 basis points in order to meet mandatory stress tests requirements. Currency risk is well matched in this programme with all of the assets and the 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 *Bundesanstalt für Finanzdienstleistungsaufsicht* (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. Also similar to most covered bonds in Europe, this programme has few restrictions on the future composition of the cover pool. 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 a geographical concentration, with the majority of the loans backed by properties in Germany and particular concentration in North Rhine-Westphalia (21.2%) region of Germany. Additionally, the top five regions correspond to 63.9% of the residential properties in the cover pool. (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. (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 ay 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:	265
Issuer:	ING-DiBa AG
Covered Bond Type:	Residential mortgage covered bonds
Issued under Covered Bonds Law:	Yes
Applicable Covered Bonds Law:	German *Pfandbrief* Act
Entity used in Moody's TPI analysis:	ING-DiBa AG
CR Assessment:	Aa2(cr)
CB Anchor:	CR assessment +1 notch
Senior unsecured/deposit rating:	n/a
Total Covered Bonds Outstanding:	€3,705,000,000
Main Currency of Covered Bonds:	EUR (100.0%)
Extended Refinance Period:	No
Principal Payment Type:	Hard bullet
Interest Rate Type:	Fixed rate covered bonds (97.3%), Floating rate covered bonds (2.7%)
Committed Over-Collateralisation:	2% (on a stressed NPV basis)
Current Over-Collateralisation:	40.1% (on an unstressed NPV basis)
Intra-group Swap Provider:	No
Monitoring of Cover Pool:	Cover pool monitor (*Treuhänder*), mandatory by operation of the *Pfandbrief* Act
Trustees:	n/a
Timely Payment Indicator:	High
TPI Leeway:	6 notches

Sources: Moody's Investors Service, issuer data

Exhibit 3

Cover pool characteristics

Size of Cover Pool:	€4,846,918,814
Main Collateral Type in Cover Pool:	Residential (94.8%)
Main Asset Location of Ordinary Cover Assets:	Germany (100.0%)
Main Currency:	EUR (100.0%)
Loans Count:	57,322
Number of Borrowers:	51,438
WA Unindexed LTV:	91.6%
WA Indexed LTV:	n/a
WA Seasoning (in months):	70
WA Remaining Term (in months):	388
Interest Rate Type:	Fixed rate assets(100.0%)
Collateral Score:	5.0% (3.0% excluding systemic risk)
Cover Pool Losses:	15.8%
Further Cover Pool Details:	See Appendix 1
Pool Cut-off Date:	30 June 2019

Sources: Moody's Investors Service, issuer data

Covered bond description

The covered bonds issued under the mortgage covered bond programme of ING-DiBa 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 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 June 2019, the level of OC in the programme was 40.1% on an unstressed net 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 OC exceeds the principal balance of the bonds by 2%. Based on data as of 30 June 2019, 0.0% of OC is sufficient to maintain the current covered bond rating, which is lower than committed OC.

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 ING-DiBa AG - 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 Aa2(cr). (For a description of the issuer's rating drivers, see Credit Opinion, published July 2019)

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. (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")

Aspects of this covered bond programme that are refinancing-positive 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 issuer is also required to cover potential liquidity gaps over the next 180 days, i.e., the liquidity-matching requirements between payments expected to be received under the cover pool assets and the payments due under the outstanding covered bonds

Aspects of this covered bond programme that are refinancing-negative 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 schedule, with no extension period

» 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.

Exhibit 4

Overview of assets and liabilities

	WAL Assets (Years)	WAL Liabilities (Years)	Assets (%)	Liabilities (%)
Fixed rate	30.7	10.1	100.0%	97.3%
Variable rate	n/a	3.7	n/a	2.7%

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 outstanding or cover assets in the cover pool

» The majority of covered bonds outstanding (97.3%) and all of the cover pool assets pay a fixed rate. This limits the potential interest rate mismatches in case of rate movements

» The requirement under the *Pfandbrief* Act that the stressed net 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. ING-DiBa opted for the "dynamic" stress test to meet mandatory stress tests requirements. This includes a parallel movement of the interest-rate curve by at least 100 basis points in order 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 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. All of the cover pool assets are fixed rate

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

» The weighted average life of the assets is longer than for other mortgage covered bonds in Germany

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 six notches. This six-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 six 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 bullet repayment at maturity, without any extension period for the repayment of the bonds

» The covered bond programme does not benefit from a 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

» The weighted average life of the assets is longer than for other mortgage covered bonds in Germany

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% on a net 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 30 June 2019

As of 30 June 2019, the cover pool consisted mostly of residential mortgage loans (94.8%) and and further cover assets that constitute substitute assets under the *Pfandbrief* Act (5.2%). All properties, which are serving as security for the mortgage loans, are located in Germany, of which most of those loans are located in North Rhine-Westphalia (21.2%), Bavaria (12.5%), Hesse (12.3%) and Baden-Württemberg (10.3%). The vast majority of the loans are annuity loans. All the loans are performing.

On a nominal value basis, the cover pool assets total €4.85 billion, which back €3.71 billion in covered bonds, resulting in an OC level of 40.1% on an unstressed net present value basis. (For ING-DiBa's underwriting criteria, see "Appendix: Income underwriting and valuation")

The weighted average unindexed loan-to-value (LTV) ratio of the residential mortgage loans is 91.6%.

The vast majority of origination is conducted through independent brokers, which are either part of the group/the issuer, or external. ING-DiBa implemented a broad range of controls that aim to optimise the efficiency of origination. Further controls are implemented to limit negative selection of borrowers and potential exposure to fraud by any party. ING-DiBa only accepts fully documented loans, therefore an independent verification of income is a prerequisite for the release of funds. The credit decision is made by credit officers who are employees of ING-DiBa, but separate from the relevant broker. Important steps taken during the credit process by these employees include: the verification of the results of the scoring model and documentation including proof of income. Credit bureau checks are a mandatory step of this credit process; borrowers with a negative flag are rejected. In addition, the credit officers of ING-DiBa have no power to override the results calculated by the scoring system in the case of a rejected borrower.

ING-DiBa uses a model developed by *Sprengnetter* for its valuations. This model has been certified for use to determine the lending value. The *Sprengnetter* model is updated regularly; Moody's understands that these updates take into consideration data points provided by valuers that *Sprengnetter* certifies.

Exhibits 5 and 6 below show more details about the cover pool characteristics.

Residential mortgage loans

Exhibit 5

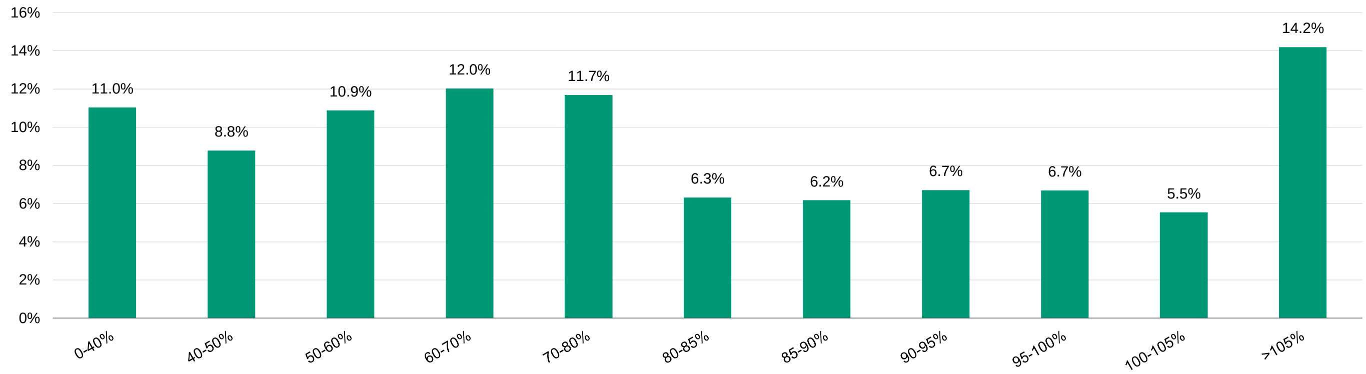
Cover pool summary

Overview		Specific Loan and Borrower characteristics	
Asset type:	Residential	Loans with an external guarantee in addition to a mortgage:	0.0%
Asset balance:	4,596,918,814	Interest only Loans	5.3%
Average loan balance:	80,195	Loans for second homes / Vacation:	0.0%
Number of loans:	57,322	Buy to let loans / Non owner occupied properties:	14.1%
Number of borrowers:	51,438	Limited income verified:	0.0%
Number of properties:	51,809	Adverse credit characteristics (**)	0.0%
WA remaining term (in months):	388		
WA seasoning (in months):	70	**Performance**	
		Loans in arrears (≥ 2months - < 6months):	0.0%
Details on LTV		Loans in arrears (≥ 6months - < 12months):	0.0%
WA unindexed LTV (*)	91.6%	Loans in arrears (≥ 12months):	0.0%
WA Indexed LTV:	n/a	Loans in a foreclosure procedure:	0.0%
Valuation type:	Lending Value		
LTV threshold:	60.0%	**Multi-Family Properties**	
Junior ranks:	n/a	Loans to tenants of tenant-owned Housing Cooperatives:	n/a
Loans with Prior Ranks:	0.0%	Other type of Multi-Family loans (***)	n/a

(note *) may be based on property value at time of origination or further advance or borrower refinancing
(note **) Typically borrowers with a previous personal bankruptcy or borrowers with record of court claims against them at time of origination
(note ***) This "other" type refers to loans directly to Housing Cooperatives and to Landlords of Multi-Family properties (not included in Buy to Let)
Sources: Moody's Investors Service, issuer data

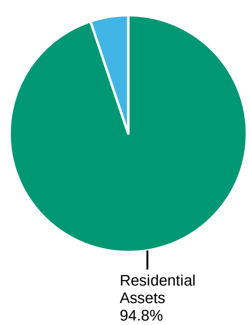
Exhibit 6
Cover pool characteristics

Exhibit A
Balance per LTV-band



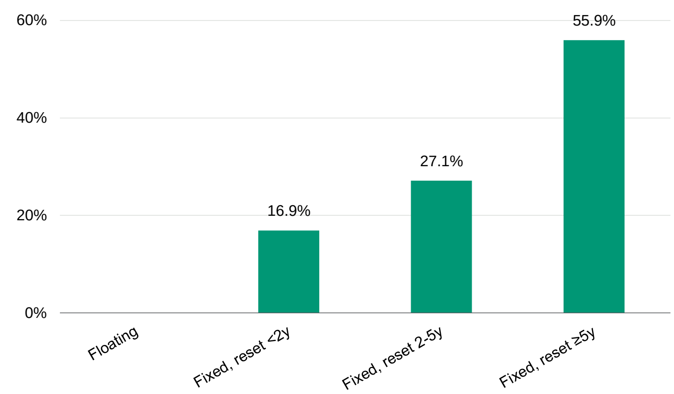
Sources: Moody's Investors Service, issuer data

Exhibit B
Percentage of residential assets



Sources: Moody's Investors Service, issuer data

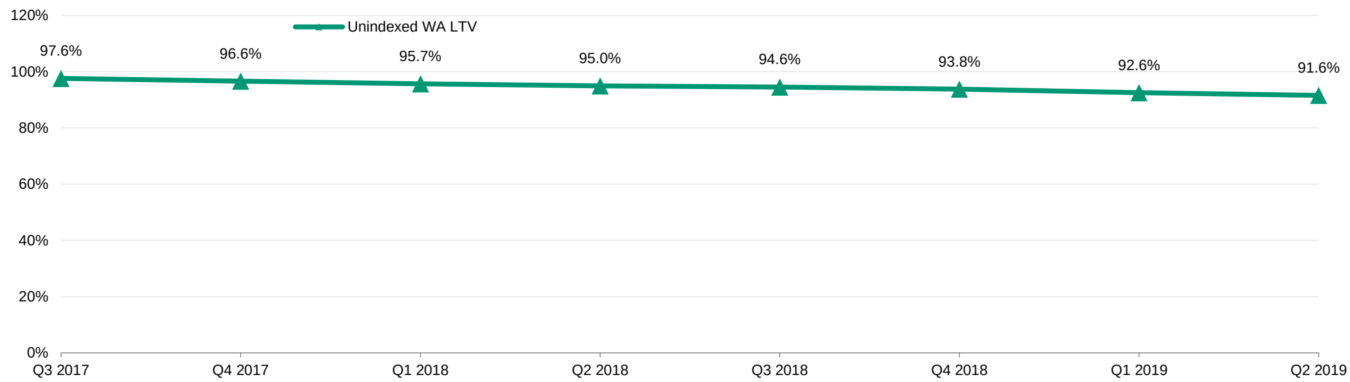
Exhibit C
Interest rate type



Sources: Moody's Investors Service, issuer data

Exhibit D

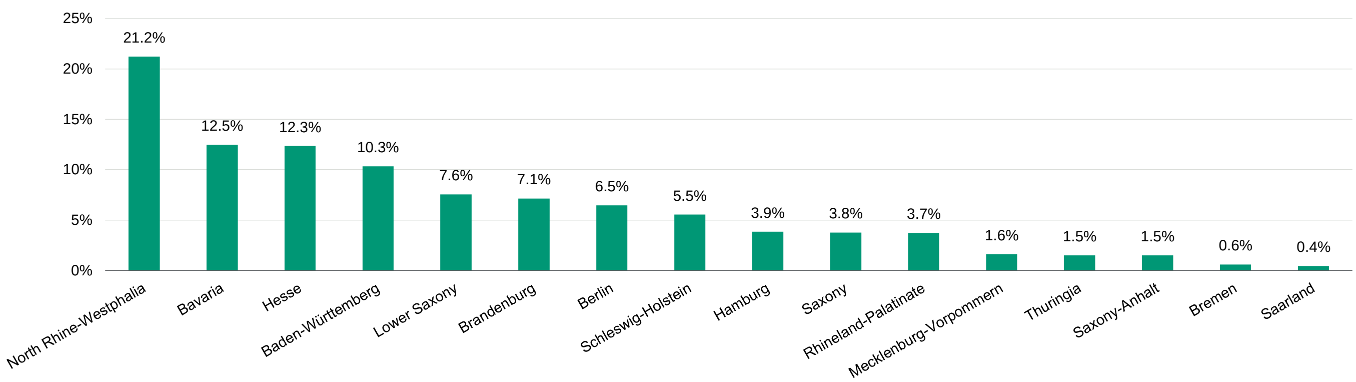
LTV



Sources: Moody's Investors Service, issuer data

Exhibit E

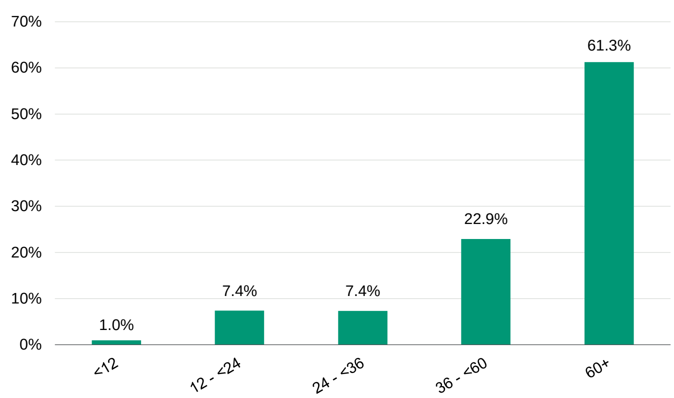
Main country regional distribution



Sources: Moody's Investors Service, issuer data

Exhibit F

Seasoning (in months)



Sources: Moody's Investors Service, issuer data

Substitute assets

Of the cover assets, €250.0 million (5.2%) 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 less 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 loans are first ranking and fixed rate

» The vast majority of the cover pool assets are amortising loans

» The issuer does not include loans to its employees in the cover pool

» The vast majority of cover pool loans are owner occupied residential properties (81.4%)

Aspects specific to this programme that are credit negative include:

» The vast majority of loans have been conducted through independent brokers rather than direct channels of ING-DiBa

» As common in the German market, limited information was provided on junior ranks

» Regional concentrations in on North Rhine-Westphalia (21.2%), Bavaria (12.5%), Hesse (12.3%) and Baden-Württemberg (10.3%) regions of Germany

» The weighted average unindexed LTV of 91.6% for residential mortgage loans

Comparables

Exhibit 7

Comparables - ING-Diba AG - Mortgage Covered Bonds and other deals

PROGRAMME NAME	ING-Diba AG - Mortgage Covered Bonds	Commerzbank AG - Mortgage Covered Bonds	Deutsche Bank AG - Mortgage Covered Bonds	Deutsche Kreditbank 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	3,705,000,000	19,778,556,465	8,039,500,000	4,589,600,000
Total assets in the Cover Pool	4,846,918,814	29,060,669,145	10,273,096,602	7,211,791,319
Issuer name	ING-DiBa AG	Commerzbank AG	Deutsche Bank AG	Deutsche Kreditbank AG
Issuer CR assessment	Aa2(cr)	A1(cr)	A3(cr)	A1(cr)
Group or parent name	n/a	n/a	n/a	n/a
Group or parent CR assessment	n/a	n/a	n/a	n/a
Main collateral type	Residential	Residential	Residential	Other
Collateral types	Residential 95%, Commercial 0%, Public Sector 0%, Other/Supplementary assets 5%	Residential 90%, Commercial 2%, Public Sector 0%, Other/Supplementary assets 8%	Residential 86%, Commercial 11%, Public Sector 0%, Other/Supplementary assets 3%	Public Sector 0%, Residential 31% Commercial 64%, Other/Supplementary assets 4%
Ratings				
Covered bonds rating	Aaa	Aaa	Aaa	Aaa
Entity used in Moody's EL & TPI analysis	ING-DiBa AG	Commerzbank AG	Deutsche Bank AG	Deutsche Kreditbank AG
CB anchor	CR Assessment + 1 notch	CR Assessment + 1 notch	CR Assessment + 1 notch	CR Assessment + 1 notch
CR Assessment	Aa2(cr)	A1(cr)	A3(cr)	A1(cr)
SUR / LT Deposit	n/a	A1	A3	n/a
Unsecured claim used for Moody's EL analysis	Yes	Yes	Yes	Yes
Value of Cover Pool				
Collateral Score	5.0%	5.6%	5.3%	6.6%
Collateral Score excl. systemic risk	3.0%	3.4%	3.4%	5.6%
Collateral Risk (Collateral Score post-haircut)	3.4%	3.7%	3.5%	4.4%
Market Risk	12.4%	12.2%	12.4%	14.7%
Over-Collateralisation Levels				
Committed OC*	2.0%	2.0%	2.0%	2.0%
Current OC	40.1%	55.3%	39.5%	55.6%
OC consistent with current rating	0.0%	6.5%	11.5%	9.5%
Surplus OC	40.1%	48.8%	28.0%	46.1%
Timely Payment Indicator & TPI Leeway				
TPI	High	High	High	High
TPI Leeway	6	4	2	4
Reporting date	30 June 2019	30 June 2019	30 June 2019	30 June 2019

Sources: Moody's Investors Service, issuer data

Additional cover pool analysis

Legal risks for assets outside of Germany

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

» Claims against borrowers outside of Germany or loans not governed by German law: In the case of loans not governed by German law, the borrower might be allowed to exercise set-off, thereby reducing the amount that would be payable to the benefit of covered bondholders. All the mortgage loans in the cover pool and further cover assets are located in Germany. Therefore, it is unlikely that there are claims of the borrowers in the pool against the insolvency estate of the issuer that can be set-off against amounts payable under the assets in the cover pool

» Loans to borrowers outside of the European Economic Area (EEA): All of the mortgage loans are granted to borrowers within the EEA. If this criteria were to change, in addition to the above risk, the cover pool assets might not be available to the covered bondholders on a priority basis because other (unsecured) creditors of the issuer might successfully access the assets in the cover pool. These actions might result in lower recovery, owing, for example, to secondary proceedings commenced under the respective domestic law. Currently, the cover pool contains loans exclusively in Germany

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
3 Percentage of loans in Cover Pool that have limited income verification	0%
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 typically on an annuity basis, which determines the duration of the loan. Residential mortgage loans have a duration of up to 35 years.
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?	No
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)	The issuer has established a calculation grid for living expenses of the household, which takes into consideration, e.g. the number of persons living in the household.
Other comments	None
B. Residential Valuation	
1 Are valuations based on market or lending values?	In order to determine the eligible loan volume for the cover pool, the lending value according to German lending value regulation (or Beleihungswert) has to be used. During the credit process the market value of the property will also be calculated and taken into consideration.
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)?	No,valuations are made by qualified staff according to §24 para 1 BelWertV, legal requirements for ‘retail loans’ (Kleindarlehen < €400.000). In accordance with §24 para 2 BelWertV, an external valuer values a random sample of 2% of the quarterly loans taken into the mortgage registry on a regular basis.
3 How are valuations carried out where an external valuer not used?	Valuations are made by qualified staff according to §24 para 1 BelWertV, legal requirements for ‘retail loans’ (Kleindarlehen < €400.000) with the aid of an external collateral value calculation tool.
4 What qualifications are external valuers required to have?	External valuers have to have a professional background as real-estate appraisers. In addition, appraisers have recognised certificates according to DIN EN ISO/IEC 17024 (market standard in Germany).
5 What qualifications are internal valuers required to have?	N/A - up-to-date no internal valuers are used.
6 Do all external valuations include an internal inspection of a property?	No
7 What exceptions?	None
8 Do all internal valuations include an internal inspection of a property?	Some internal valuations within the framework of the small loan limit in accordance with §24 BelWertV (Kleindarlehen < €400.000) include an internal inspection.
9 What exceptions?	None
Other comments	Not applicable

Source: Issuer

Moody's related publications

Rating Methodology

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

Special Comments

- Covered Bonds - Global: 2019 Outlook, December 2018 (1141185)
- Covered Bonds: Sector update – Q3 2019: Covered bonds gain traction in Central and Eastern European markets, October 2019 (1195474)
- Covered Bonds: Sector update – Q2 2019: First positive impact and block chain covered bonds from France; Libor transition continues, August 2019 (1184222)
- EU Bank Recovery and Resolution Regime Strengthens German Covered Bonds and Improves Their Ratings, July 2015 (1006468)
- Structural Protection Mechanisms for Non-EEA Assets in German Cover Pools, July 2014 (SF374519)
- Germany - Legal Framework for Covered Bonds, July 2019 (1178095)
- Structured Finance - Germany: Proposed countercyclical capital buffer is credit positive for German mortgage covered bonds, May 2019 (1178228)
- Covered Bonds - Global: Germany has strongest legal framework overall, while other countries have strengths in specific areas, August 2018 (1126419)
- Covered Bonds - Germany: Brexit-related changes to the Pfandbrief act are credit positive for German covered bonds, February 2019 (1163630)

Performance Overview

- ING-Diba AG - Mortgage Covered Bonds, October 2019 (SF484653)

Credit Opinion

- ING-DiBa AG

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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