MOODY'S INVESTORS SERVICE

CREDIT OPINION
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TABLE OF CONTENTS

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Commerzbank AG - Mortgage Covered Bonds

Update to New Issue Report, reflecting data as of 31 December 2018 - German covered bonds

Ratings

Exhibit 1

Cover Pool (€)	Ordinary Cover Pool Assets	Covered Bonds (€)	Rating
26,335,656,415	Residential & Commercial Mortgage Loans	18,239,484,541	Aaa

Source: Moody's Investors Service

Summary

The covered bonds issued by Commerzbank AG (Commerzbank or the issuer) under the Commerzbank AG - Mortgage Covered Bonds programme are full recourse to the issuer and are secured by a cover pool of assets consisting of residential assets (93.2%) and commercial assets (2.5%) secured by properties located in Germany as well as supplementary assets (4.3%).

Credit strengths include the full recourse of the covered bonds 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.

Our credit analysis takes into account the cover pool's credit quality, which is reflected in the collateral score of 5.6%, and the current over-collateralisation (OC) of 50.0% (on an unstressed present value basis) as of 31 December 2018.

Credit strengths

» ***Recourse to the issuer***: The covered bonds are full recourse to the issuer Commerzbank rated A1(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 cover pool of high-quality assets. The cover pool consists of residential mortgage loans (93.2%) and commercial mortgage loans (2.5%) secured by properties located in Germany as well as supplementary assets (4.3%). The collateral quality is reflected in the collateral score, which is currently 5.6%. (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. A CB anchor event occurs when the issuer, or another entity within the issuer group that supports the issuer, ceases to service the payments on the covered bonds. The liquidity matching requirement for the next 180 days also reduce refinancing risk. (See "Covered bond analysis")
- » ***Interest rate and currency risks***: Interest rate risk is mitigated by the 2% OC requirement, which has to be maintained in stressed market conditions (that is, yield curve movements and changes in the relevant exchange rates). Currently, there is no currency risk in this programme as all assets and all covered bonds are denominated in EUR. (See "Covered bond analysis")
- » ***Provisions for a cover pool administrator***: Following an issuer default, the covered bondholders would benefit from a cover pool administrator (the *Sachwalter*) that acts independently from the issuer's insolvency administrator. Furthermore, if the German banking regulator BaFin deems it necessary, the *Sachwalter* may be appointed ahead of any issuer default. (See "Covered bond analysis")

Credit challenges

- » ***High level of dependency on the issuer:*** As with most covered bonds, before the insolvency of the issuer, the issuer can materially change the nature of the programme. For example, the issuer can add new assets to the cover pool, issue new covered bonds with varying promises and enter into new hedging arrangements. 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")
- » ***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 any designated source of liquidity if cash flow collections are interrupted. (See "Covered bond analysis")

Key characteristics

Exhibit 2

Covered bond characteristics

Moody's Programme Number.	374
Issuer:	Commerzbank AG
Covered Bond Type:	Mortgage
Issued under Covered Bonds Law:	Yes
Applicable Covered Bond Law:	German Pfandbrief Act (*Pfandbriefgesetz*)
Entity used in Moody's EL and TPI analysis	Commerzbank AG
CR Assessment:	A1(cr)
CB Anchor:	CR assessment +1 notch
Senior unsecured/deposit rating:	A1
Total Covered Bonds Outstanding:	€ 18,239,484,541
Main Currency of Covered Bonds:	EUR (100%)
Extended Refinance Period:	No
Principal Payment Type:	Hard bullet
Interest Rate Type:	Fixed rate covered bonds (99.5%), floating rate covered bonds (0.5%)
Committed Over-Collateralisation:	2%
Current Over-Collateralisation:	50.0% (present value)
Intra-group Swap Provider:	n/a
Monitoring of Cover Pool:	Trustee (*Treuhänder*)
Timely Payment Indicator:	High
TPI Leeway:	4 notches

Source: Moody's Investors Service

Exhibit 3

Cover pool characteristics

Size of Cover Pool:	€26,335,656,415
Main Collateral Type in Cover Pool:	Residential mortgage loans (93.2%), Commercial mortgage loans (2.5%)
Main Asset Location of Ordinary Cover Assets:	Germany (100%)
Main Currency:	EUR (100%)
Loans Count:	Residential: 212,658; Commercial: 506
Number of Borrowers:	Residential: 175,990; Commercial: 441
WA unindexed LTV:	Residential: 67.3%; Commercial: 70.0%
WA indexed LTV:	n/a
WA Seasoning:	Residential: 63 months; Commercial: 66 months
WA Remaining Term:	Residential: 243 months; Commercial: 228 months
Interest Rate Type:	Fixed rate assets (95.3%), floating rate assets (4.7%)
Collateral Score:	5.6%
Cover Pool Losses:	15.9%
Further Cover Pool Details:	See "Cover pool description"
Pool Cut-off Date:	31 December 2018

Source: Moody's Investors Service

Covered bond description

The covered bonds issued under the mortgage covered bond programme of Commerzbank are full recourse to the issuer. Upon a CB anchor event, covered bondholders would have access to a cover pool of mixed loan receivables of residential and commercial mortgage loans as well as substitute assets.

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 31 December 2018, the level of OC in the programme was 50.0% on an unstressed present value basis.

The current covered bond rating relies on a level of OC that is above the minimum legal requirements by the German *Pfandbrief* Act. The act requires that the stressed present value of the cover pool assets exceeds the stressed present value of the covered bonds by 2%. Based on data as of 31 December 2018, 6.5% of OC on an unstressed present value basis is sufficient to maintain the current covered bond rating. This shows that our analysis currently relies on OC that is not in committed form.

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

Legal framework

The covered bonds are governed by the German *Pfandbrief* Act. There are a number of strengths in this legislation, including the regulation of the issuer by BaFin (Bundesanstalt für Finanzdienstleistungsaufsicht), 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 Commerzbank's mortgage covered bond programme. (See Covered Bonds: Germany - Legal Framework for Covered Bonds, August 2015, for a description of the general legal framework for *Pfandbriefe* 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 A1(cr). (For a description of the issuer's rating drivers, see Credit Opinion, published February 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”).

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

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

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

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

The refinancing-negative aspects of this covered bond programme include the fact that 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, which is typical of German *Pfandbrief* 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 of assets and liabilities

	WAL Assets (Years)	WAL Liabilities (Years)	Assets (%)	Liabilities (%)
Fixed rate	12.8	4.7	95.3%	99.5%
Variable rate	13.1	5.4	4.7%	0.5%

Source: 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 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 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:

» The majority of assets in the cover pool (95.3%) pay fixed rate interest and 99.5% of outstanding bonds pay fixed rate interest. This limits the potential interest-rate mismatches in case of rate movements.

» All cover pool assets and all covered bonds are denominated in EUR so that currently there is no exchange rate risk in the programme.

» The requirement under the *Pfandbrief* Act that the stressed present value OC of the cover pool must exceed, by at least 2%, the stressed present value of the 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. Commerzbank opted for the “dynamic” 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 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.

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 four notches. This four-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 four 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 5.6%.

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 any designated source of liquidity if cash flow collections are interrupted.

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

Additional analysis

Liquidity

The covered bond programme would not benefit from any designated source of liquidity if cash flow collections were to be interrupted. However, before an issuer default, the *Pfandbrief* Act requires the issuer to cover potential liquidity gaps for the next 180 days and to maintain a minimum OC level of 2%. 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. However, if it is determined that cover pool assets will not be sufficient to repay covered bonds, cover pool insolvency will trigger acceleration and this will mean all covered bond holders rank equally.

Cover pool description

Pool description as of 31 December 2018

As of 31 December 2018, the cover pool consisted of residential (93.2%) and commercial mortgage loans (2.5%) secured by properties located in Germany as well as supplementary assets (4.3%).

On a nominal value basis, the cover pool assets total €26.3 billion, which back €18.2 billion in covered bonds, resulting in an OC level of 50.0% on an unstressed present value basis. (For Commerzbank underwriting criteria, see "Appendix: Income underwriting and valuation")

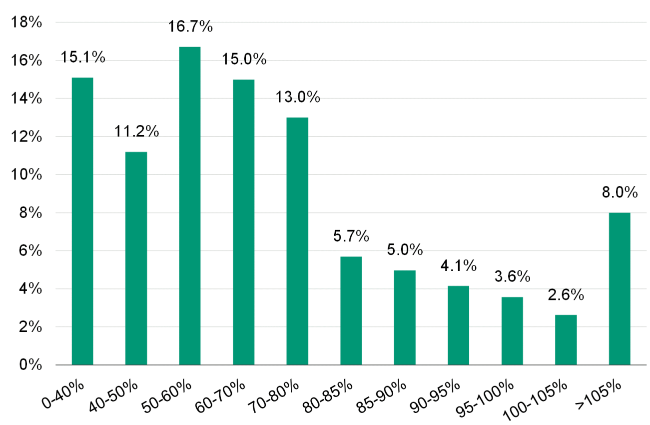
Following Exhibits show more details about the cover pool characteristics.

Exhibit 5
Residential Assets

Overview		Specific Loan and Borrower characteristics	
Asset type:	Residential	Loans with an external guarantee in addition to a mortgage:	n/a
Asset balance:	24,552,770,496	Interest only Loans	7.1%
Average loan balance:	115,457	Loans for second homes / Vacation:	0.0%
Number of loans:	212,658	Buy to let loans / Non owner occupied properties:	25.2%
Number of borrowers:	175,990	Limited income verified:	0.0%
Number of properties:	196,154	Adverse credit characteristics (**)	0.0%
WA remaining term (in months):	243		
WA seasoning (in months):	63	**Performance**	
		Loans in arrears (≥ 2months - < 6months):	0.0%
Details on LTV		Loans in arrears (≥ 6months - < 12months):	0.0%
WA unindexed LTV (*)	67.3%	Loans in arrears (≥ 12months):	0.0%
WA Indexed LTV:	n/d	Loans in a foreclosure procedure:	0.0%
Valuation type:	Lending Value		
LTV threshold:	60.0%	**Multi-Family Properties**	
Junior ranks:	n/d	Loans to tenants of tenant-owned Housing Cooperatives:	n/a
Prior ranks:	n/d	Other type of Multi-Family loans (***)	n/a

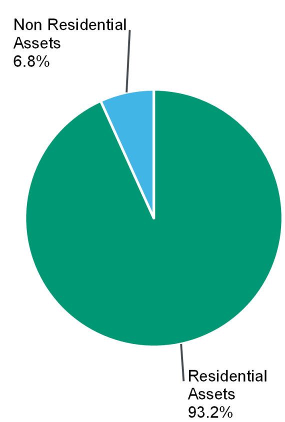
Source: Moody's Investors Service

Exhibit 6
Balance per LTV-band



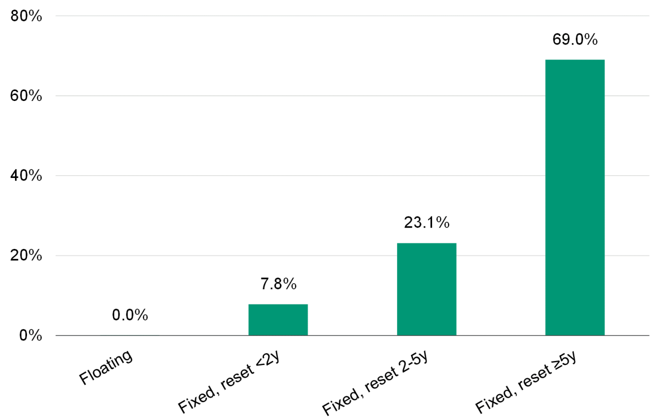
Source: Moody's Investors Service, issuer data

Exhibit 7
Percentage of residential assets



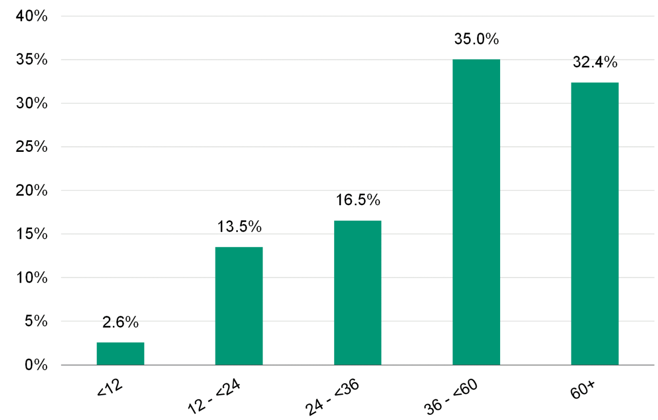
Source: Moody's Investors Service, issuer data

Exhibit 8
Interest rate type



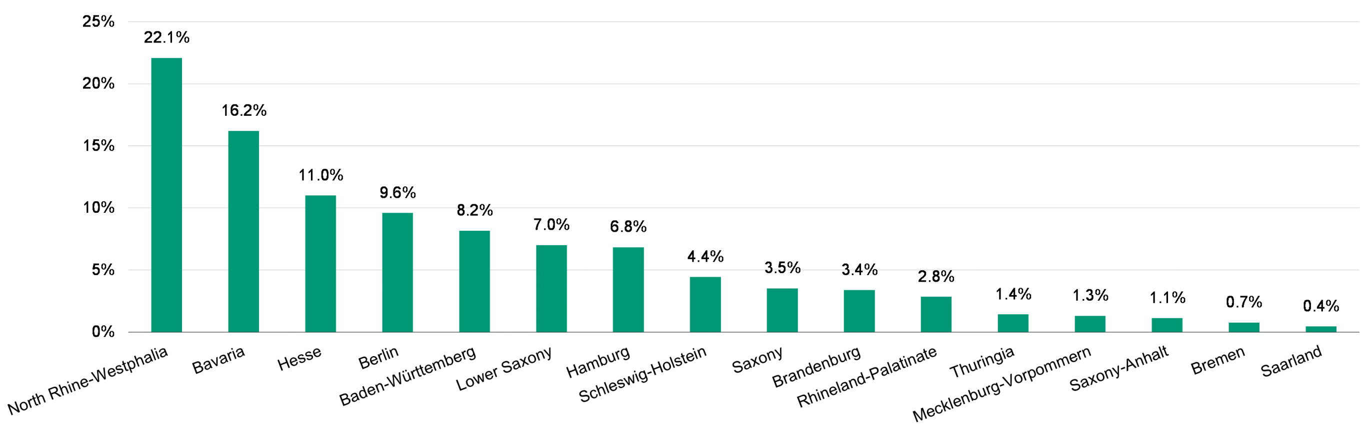
Source: Moody's Investors Service, issuer data

Exhibit 9
Seasoning (in months)



Source: Moody's Investors Service, issuer data

Exhibit 10
Main country regional distribution



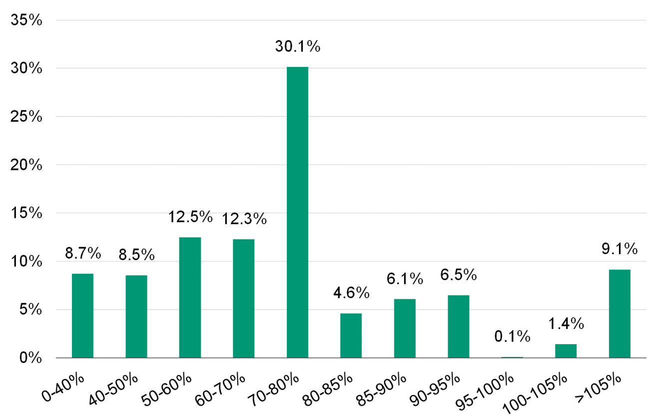
Source: Moody's Investors Service, issuer data

Exhibit 11
Commercial Assets

Overview		Specific Loan and Borrower characteristics	
Asset type:	Commercial	Bullet loans:	34.2%
Asset balance:	658,518,944	Loans in non-domestic currency:	0.0%
Average loan balance:	1,301,421	Percentage of fixed rate loans:	71.6%
Number of loans:	506	**Performance**	
Number of borrowers:	441	Loans in arrears ≥ 2 months:	0.0%
Number of properties:	473	Loans in a foreclosure procedure:	0.0%
Largest 10 loans:	44.6%	**Details on LTV**	
WA remaining term (in months):	228	WA current LTV(*):	70.0%
WA seasoning (in months):	66	WA indexed LTV:	n/d
Main countries:	Germany (100%)	Valuation type:	Lending Value
		LTV Threshold:	60.0%
		Junior ranks:	n/d
		Prior and Equal ranks:	0.0%

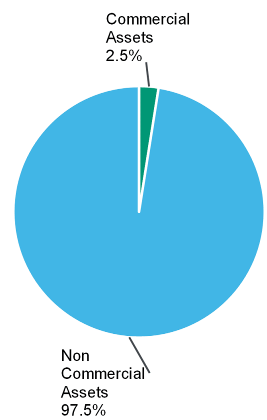
Source: Moody's Investors Service

Exhibit 12
Balance per LTV-band



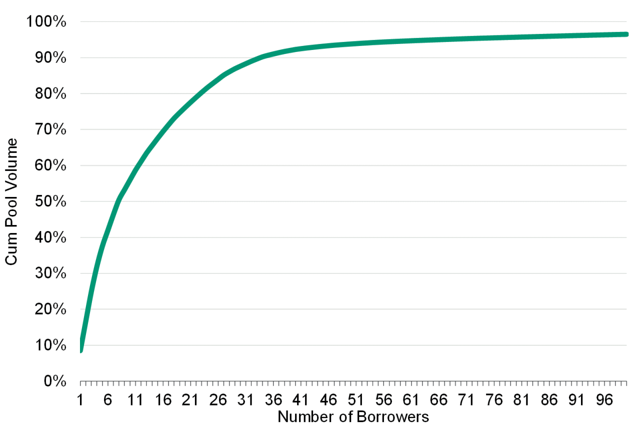
Source: Moody's Investors Service, issuer data

Exhibit 13
Percentage of commercial assets



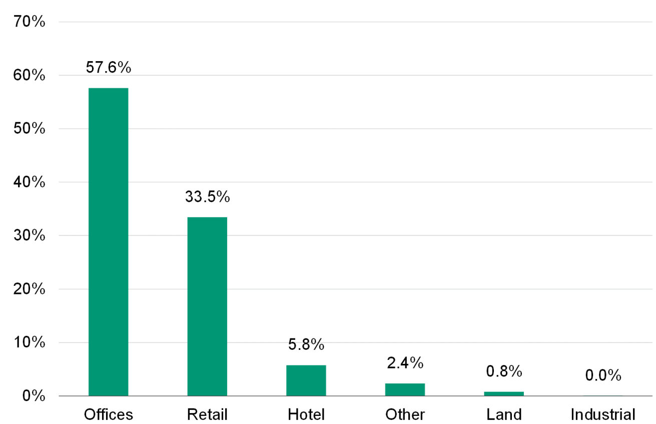
Source: Moody's Investors Service, issuer data

Exhibit 14
Borrower concentration



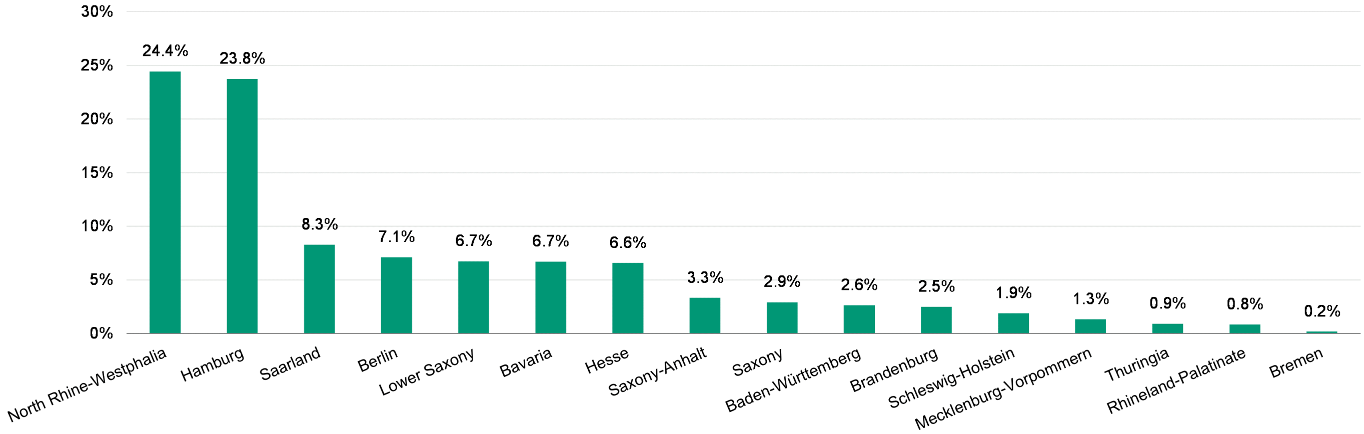
Source: Moody's Investors Service, issuer data

Exhibit 15
Property type



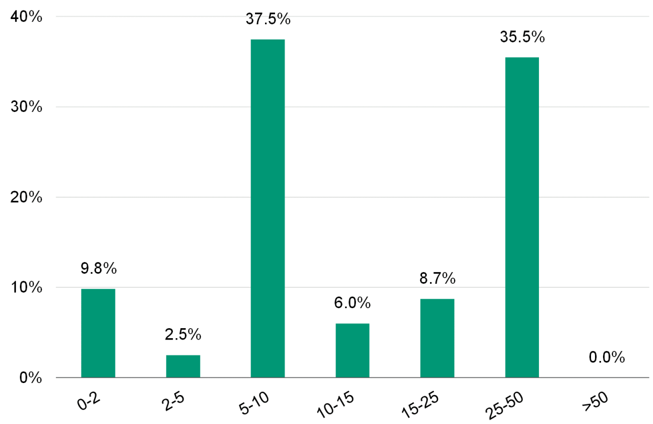
Source: Moody's Investors Service, issuer data

Exhibit 16
Main country regional distribution



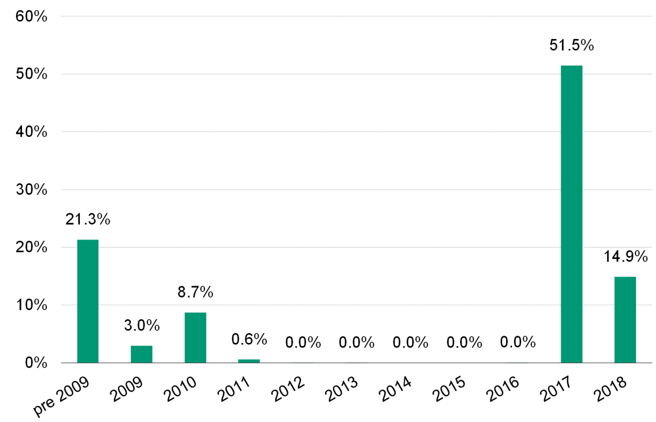
Source: Moody's Investors Service, issuer data

Exhibit 17
Remaining Term (in years)



Source: Moody's Investors Service, issuer data

Exhibit 18
Year of loan origination



Source: Moody's Investors Service, issuer data

Substitute assets

Of the cover assets, €1.12 billion (4.3%) are substitute assets. The substitute assets currently comprise a portfolio direct and guarantee claims against European sub-sovereigns and sovereigns.

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 commercial mortgages using a multifactor model that is created through a Monte Carlo simulation. Our analysis takes into account, among other factors, the impact of concentration on borrower, regional and country levels, as well as the credit quality of the individual borrowers.

For this programme, the collateral score of the current pool is 5.6%, comparable with the average collateral score in other German mortgage covered bonds. (For details, see "Moody's related publications - Sector update").

The following factors support the credit quality of the pool: (1) all assets are performing, and (2) the pool of residential mortgages, which represents the major part of the aggregate cover pool, is well diversified.

Comparables

Exhibit 19

Comparables - Commerzbank and other selected German deals

PROGRAMME NAME	Commerzbank AG - Mortgage Covered Bonds	Deutsche Bank AG - Mortgage Covered Bonds	ING Diba 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	18,239,484,541	7,913,400,000	2,715,000,000	4,635,600,000
Total assets in the Cover Pool	26,335,656,415	10,221,769,338	4,135,857,028	7,764,027,835
Issuer name	Commerzbank AG	Deutsche Bank AG	ING-DiBa AG	Deutsche Kreditbank AG
Issuer CR assessment	A1(cr)	A3(cr)	Aa3(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	Commercial
Collateral types	Residential 93%, Commercial 3%, Public Sector 0%, Other/Supplementary assets 4%	Residential 86%, Commercial 11%, Public Sector 0%, Other/Supplementary assets 3%	Residential 96%, Commercial 0%, Public Sector 0%, Other/Supplementary assets 4%	Commercial 64%, Residential 32%, Public Sector 0%, Other/Supplementary assets 4%
Ratings				
Covered bonds rating	Aaa	Aaa	Aaa	Aaa
Entity used in Moody's EL & TPI analysis	Commerzbank AG	Deutsche Bank AG	ING-DiBa AG	Deutsche Kreditbank AG
CB anchor	CR Assessment + 1 notch	CR Assessment + 1 notch	CR Assessment + 1 notch	CR Assessment + 1 notch
CR Assessment	A1(cr)	A3(cr)	Aa3(cr)	A1(cr)
SUR / LT Deposit	A1	A3	n/a	A1
Unsecured claim used for Moody's EL analysis	Yes	Yes	Yes	Yes
Value of Cover Pool				
Collateral Score	5.6%	5.3%	5.0%	7.0%
Collateral Score excl. systemic risk	3.5%	3.4%	2.9%	5.3%
Collateral Risk (Collateral Score post-haircut)	3.7%	3.5%	3.4%	4.7%
Market Risk	12.2%	12.6%	12.5%	14.6%
Over-Collateralisation Levels				
Committed OC*	2.0%	2.0%	2.0%	2.0%
Current OC	50.0%	42.3%	67.3%	66.5%
OC consistent with current rating	6.5%	11.5%	0.0%	9.5%
Surplus OC	43.5%	30.8%	67.3%	57.0%
Timely Payment Indicator & TPI Leeway				
TPI	High	High	High	High
TPI Leeway	4	2	5	4
Reporting date	31 December 2018	30 September 2018	31 December 2018	31 December 2018

Source: Moody's Investors Service

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. There are no loans to borrowers outside of Germany included 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 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.

Methodology and monitoring

The primary methodology we use in rating the issuer's covered bonds is "Moody's Approach to Rating Covered Bonds". (See "Moody's related publications - Moody's Approach to Rating Covered Bonds"). Other methodologies and factors that may have been considered in the rating process can also be found on http://www.moodys.com.

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 20

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	None
4 If limited income verification loans are in the Cover Pool, describe what requirements lender has in place for these loans.	Not applicable
5 Does income in all cases constrain the amount lent (for example through some form of Income Sufficiency Test ("IST")?	Yes
6 If not, what percentage of cases are exceptions.	No exceptions.
For the purpose of any IST:	
7 Is it confirmed that income after tax is sufficient to cover both interest and principal?	Yes
8 If so over what period is it assumed principal will be paid (typically on an annuity basis)? Any exceptions?	Payment of interest and principal on an annuity basis over the whole lifetime of the loan, i.e., until maturity. No exceptions.
9 Does the age of the borrower constrain the period over which principal can be amortised?	Yes. The age of the borrower has to be in due proportion to the amortisation period of the principal.
10 Are any stresses made to interest rates when carrying out the IST? If so when and for what type of products?	Yes. Generally a minimum annuity of 8% based on the remaining loan amount at the interest reset date is considered in the IST.
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 available residual income of the borrower has to cover interest and amortisation for the applied loan. Available residual income for interest/amortisation is calculated as net income minus costs. Net income includes: Wage/Salary of employed persons (Payroll statement of the last two months; in case of deviating income, average of last 12 months), Income/Profit of self-employed persons (statement of revenues and expenditures), Income from rent and lease (sustainable income from rents and leases (without auxiliary costs), verification e.g. by rental contract, account turnover), Income from capital (bank statements, savings accounts, tax statements), Other income (pension approval certificates, child allowances, alimonies, verfication by pension approval certificates, adequate documents). Costs contains (verification usually only for implausibilities): Running costs minimum lump sum as follows: Main applicant: €500/month; Two persons – an additional €400/month; Each additional person - an additional €350/month), above minimum lump sum 30% of net income resp. maximum lump sum, declaration of borrower, if > maximum lump sum, Rents (verification e.g. by rental contract), Auxiliary costs (verification by occurring costs, benchmark €1.60 to €5.00 per square metre living space). Liabilities (minimum annuity of 8%, calculated upon drawing on the credit facilities after end of fixed interest rate), Pension provision (contribution to social security (if not discharged by employer) and other insurances, building society contracts etc., verification e.g. by contracts. Leasing payments, subsistence allowances etc., verification by adequate documents
Other comments	-

B. Residential Valuation	
1 Are valuations based on market or lending values?	In the framework of (internal and external) valuations of properties, market as well as lending values will be calculated. If a purchasing price is available it is basically the cap (lowest value principle).
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, for loans which are used for financing of residential property and which are within the regulation of sub-section 24 BelWertV (German regulation regarding determining the mortgage lending value) for small loans,(<€400,000) internal valuations will be carried out. External valuations are compiled by Kenstone GmbH (allied company of Commerzbank group)
3 How are valuations carried out where an external valuer not used?	For loans which are used for financing of residential property and which are within the regulation of sub-section 24 BelWertV (German hypothecary rating regulation) for small loans, internal valuations will be carried out by qualified employees of the Commerzbank and are supplemented by an inspection report.
4 What qualifications are external valuers required to have?	External valuers must prove a certification according to the international accepted criteria of DIN EN ISO/EC 17024 (HypZert).
5 What qualifications are internal valuers required to have?	Internal valuers must prove long-term experience and expertise in valuation of properties. A periodical qualification is carried out through in-house training.
6 Do all external valuations include an internal inspection of a property?	Yes, all external valuations include internal and external inspection of the property.
7 What exceptions?	None
8 Do all internal valuations include an internal inspection of a property?	No
9 What exceptions?	In case of valuations of residential properties within the regulation of sub-section 24 BelWertV (German hypothecary rating regulation) for small loans, an internal and external inspection are required. In case of exception it is possible to abstain from the internal inspection only, provided that the valuation parameters are sufficiently known.
Other comments	This questionnaire has been answered in due care according to the existing credit policy of Commerzbank.

Source: Commerzbank

Moody's related publications

Rating Methodology

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

Special Comments

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

» Sector update - Q4 2018: Harmonisation takes shape in Europe; first covered bonds issue in Japan, February 2019 (1157737)

Performance Overview

» Commerzbank AG - Mortgage Covered Bonds, March 2019

Credit Opinion

» Commerzbank AG

Webpages

» Covered Bonds: www.moodys.com/coveredbonds

» Covered Bonds Legal Frameworks

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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