

Creditreform Covered Bond Rating

DZ HYP AG

Public Sector Covered Bond Program

Creditreform 
Rating

Rating Object

Country Issuer	Germany	Repayment method	Hard Bullet
Cover pool asset class	Public Sector		Min (2,00%)
Legal framework	German Pfandbrief Act	Overcollateralization	Current (14,25%)
Nominal value	EUR 13.730,27 m.		Committed (2,00%)
Cover pool value	EUR 15.686,18 m.		Fix (95,58%)
WAL maturity covered bonds	7,50 (Years)	Covered bonds coupon type	Floating (4,42%)
WAL maturity cover pool	8,70 (Years)		Other (0,00%)
Cut-off date Covered Pool Information:		30.06.2020	

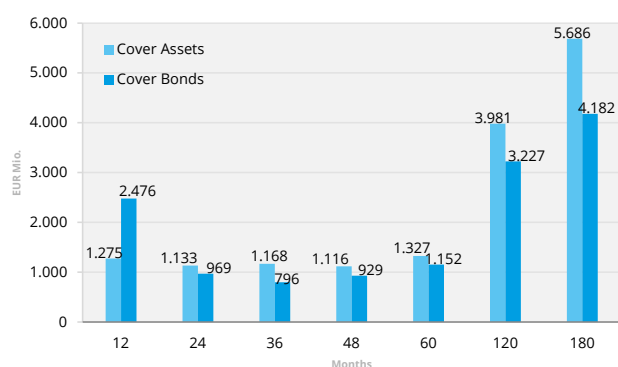
Rating Overview

Rating Summary		Credit Risk Metrics	
Issuer	DZ HYP AG	Metrics date	20.12.2019
LT Issuer Rating	AA-	Rating Case Default Rate	19,92%
ST Issuer Rating	L1	Rating Case Recovery Rate	40,87%
+Legal and regulatory framework analysis	+4 Notches	Expected Loss	11,78%
+Liquidity and refinancing risk	+1 Notch	Rating Case Breakeven OC	14,05%
= Rating after 1st uplift	AAA	<i>Program Key Counterparties</i>	
Cover Pool & cash flow analysis	AAA	Servicer	NA
+ 2nd rating uplift	+3 Notches	Account Bank	NA
Rating covered bond program / Outlook	AAA "Watch Negative"	Sponsor	NA

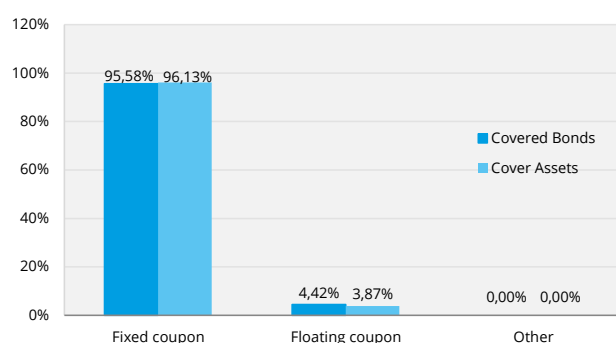
Cover Assets Composition

General Information		Breakdown by type of Assets	
Cover Pool Balance	EUR 15.686,18 m.	Loans	EUR 13.044,76 m.
Average Seasoning	NA	Bonds	EUR 2.576,14 m.
Total number of exposures	18.216	Other	EUR 0,00 m.
Distribution by type of asset		Distribution by Debtor size	
Mortgages	EUR 0,00 m.	Average Size Loans (EUR k.)	858
Public Sector	EUR 15.686,18 m.	Sovereigns (EUR m.)	1.621
Shipping	EUR 0,00 m.	Regional/federal authorities (EUR m.)	3.411
Substitute Assets	EUR 65,28 m.	Local/municipal authorities (EUR m.)	9.961
Other	EUR 0,00 m.	Others (EUR m.)	694

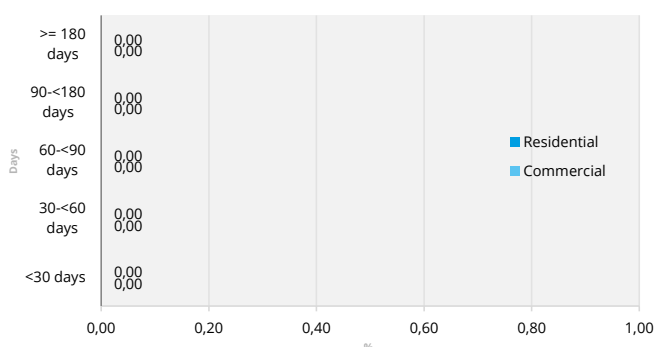
Asset-liability Profile



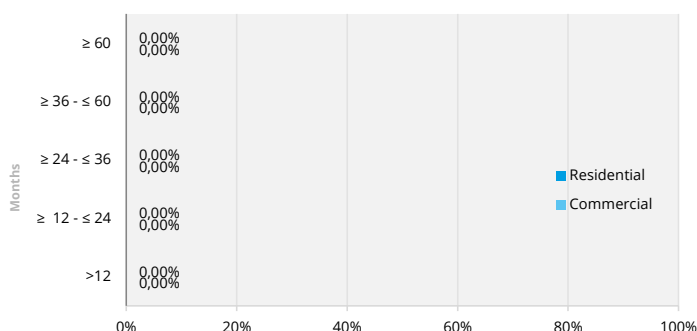
Interest Rate



Arrears Distribution



Seasoning Distribution



Unindexed LTV Distribution Commercial Loans			Unindexed LTV Distribution Residential Loans		
LTV	Nominal	% Loans	LTV	Nominal	% Loans
>0 - <=40 %	NA	NA	>0 - <=40 %	NA	NA
>40 - <=50 %	NA	NA	>40 - <=50 %	NA	NA
>50 - <=60 %	NA	NA	>50 - <=60 %	NA	NA
>60 - <=70 %	NA	NA	>60 - <=70 %	NA	NA
>70 - <=80 %	NA	NA	>70 - <=80 %	NA	NA
>80 - <=90 %	NA	NA	>80 - <=90 %	NA	NA
>90 - <=100 %	NA	NA	>90 - <=100 %	NA	NA
>100%	NA	NA	>100%	NA	NA

Currency Distribution			Loan Distribution by Regions (as % of total Public Sector assets)		
Currency	Covered Bonds	Cover Assets	Region	% of Public Sector assets	
EUR	13.152,10 m.	14.969,07 m.	Baden-Württemberg	13,08%	
AUD	0,00 m.	0,00 m.	Bavaria	11,33%	
BRL	0,00 m.	0,00 m.	Berlin	1,50%	
CAD	0,00 m.	29,11 m.	Brandenburg	0,41%	
CHF	206,55 m.	215,36 m.	Bremen	0,80%	
CZK	0,00 m.	0,00 m.	Hamburg	0,62%	
DKK	0,00 m.	0,00 m.	Hesse	17,78%	
GBP	5,48 m.	21,92 m.	Lower Saxony	12,82%	
HKD	0,00 m.	0,00 m.	Mecklenburg-Western Pomerania	1,86%	
JPY	0,00 m.	33,15 m.	North Rhine-Westphalia	22,87%	
KRW	0,00 m.	0,00 m.	Rhineland-Palatinate	8,27%	
NOK	0,00 m.	0,00 m.	Saarland	3,45%	
PLN	0,00 m.	0,00 m.	Saxony	0,68%	
SEK	0,00 m.	0,00 m.	Saxony-Anhalt	0,23%	
SGD	0,00 m.	0,00 m.	Schleswig-Holstein	2,66%	
USD	366,14 m.	417,58 m.	Thuringia	1,65%	
Other	0,00 m.	0,00 m.			

Swap Counterparties

Name	Type of arrangement	LEI
Example Bank	NA	NA

Swap Agreements

Interest Rate Swap	NA
Currency Swap	NA

ISIN Lists

Issuer	ISIN	Coupon Type	Coupon Rate (%)	Issue date	Maturity date
DZ HYP AG	DE000A0XFAE1	Floating	0,00	23.02.2009	23.02.2024
DZ HYP AG	DE000A1H3GG4	Fix	3,50	28.01.2011	28.01.2021
DZ HYP AG	DE000A2GSP23	Floating	0,00	27.02.2018	27.02.2023
DZ HYP AG	DE000A1YC8E7	Fix	1,63	18.02.2014	18.02.2022
DZ HYP AG	DE000A2BPJ11	Fix	1,13	22.11.2016	22.11.2034
DZ HYP AG	DE000A2TSD22	Fix	0,01	13.01.2020	13.01.2022
DZ HYP AG	DE000A1E8WS8	Fix	3,25	30.11.2010	30.11.2020
DZ HYP AG	DE000A13SR87	Fix	0,30	16.02.2015	16.02.2022
DZ HYP AG	DE000A0EUPP4	Fix	3,65	28.12.2005	28.12.2020
DZ HYP AG	DE000A1TM6A4	Fix	2,00	26.04.2013	26.04.2028
DZ HYP AG	DE000A2BPJ52	Fix	1,30	28.02.2017	27.02.2037
DZ HYP AG	DE000A0EUPJ7	Fix	3,82	08.12.2005	08.12.2025
DZ HYP AG	DE000A2GSMB6	Fix	3,59	20.10.2017	07.10.2022
DZ HYP AG	DE000A14J5C9	Fix	0,63	26.02.2015	26.02.2025
DZ HYP AG	DE000A0EUPPE8	Fix	3,84	30.11.2005	30.11.2020
DZ HYP AG	DE000A1YC8G2	Fix	1,78	28.02.2014	25.10.2023
DZ HYP AG	DE000A2BPJ29	Fix	1,00	29.11.2016	29.11.2032
DZ HYP AG	DE000A1MLZX7	Fix	2,38	03.05.2012	03.05.2021
DZ HYP AG	DE000A161ZP5	Fix	1,23	27.01.2016	27.01.2031
DZ HYP AG	DE000A1TNB20	Fix	1,63	17.06.2013	17.06.2021
DZ HYP AG	DE000A2TSDZ7	Fix	0,38	12.11.2019	10.11.2034
DZ HYP AG	DE000A2BPJ60	Fix	1,38	23.03.2017	23.03.2037
DZ HYP AG	DE000A0EUPM1	Fix	3,70	16.12.2005	16.12.2020
DZ HYP AG	DE000A1CSDK7	Fix	3,84	21.01.2010	21.01.2022
DZ HYP AG	DE000A12TYS2	Floating	0,00	19.02.2014	19.02.2029
DZ HYP AG	DE000A2GSMC4	Fix	1,54	24.10.2017	24.10.2039
DZ HYP AG	DE000A0EUPG3	Fix	3,80	30.11.2005	30.11.2020
DZ HYP AG	DE000A1YC8K4	Fix	1,88	18.03.2014	18.03.2024
DZ HYP AG	DE000A14J5B1	Fix	0,34	24.02.2015	24.02.2022
DZ HYP AG	DE000A2G9HG9	Fix	1,38	19.12.2018	19.12.2028
DZ HYP AG	DE000A2G9HF1	Fix	1,04	13.12.2018	13.12.2030
DZ HYP AG	DE000A2TSD06	Fix	1,03	06.12.2019	06.12.2049

Data Definitions

The data is presented with a cut-off date. Following the clarification regarding the source of information:

Issuer: Issuer source of information are all available public information, i.e. Investor Reports, Harmonised Transparency Templates "HTT", National Transparency Templates "NTT", Prospectus etc. Not reported or non available information will be labeled as "NA".

Field Name	Source	Definition
Cover pool asset class	Issuer	The asset type in the cover pool (public sector assets or mortgage assets)
Legal framework	CRA	The set of legislative and regulatory rules of the respective jurisdiction that regulates the covered bonds (CB) program
Nominal value	Issuer	The total amount of outstanding covered bonds as of cut-off date expressed in millions
Cover pool value	Issuer	Aggregate value of all assets in the cover pool as of cut-off date expressed in millions
WAL maturity covered bonds	Issuer	The weighted average remaining maturity of all outstanding covered bonds in years
WAL maturity cover pool	Issuer	The weighted average remaining maturity of all outstanding covered assets in years
Repayment method	Issuer	Hard Bullet: Covered bonds are repaid on the maturity date which cannot be extended Soft Bullet: The maturity date of the covered bonds can be extended by a fixed period Conditional pass-through (CPT): Covered bonds with a scheduled maturity date, and an extension mechanism defined by certain conditions
Overcollateralization	Issuer	Current OC: The proportion of cover assets that exceeds the proportion of currently outstanding covered bonds, calculated as $(\text{Cover pool value} / \text{outstanding covered bonds} - 1) * 100$ Min OC: The OC level that the issuer must maintain according to the respective CB legislation Committed OC: The minimum OC level that the issuer has committed to maintain
Covered bonds coupon type	Issuer	Type of interest rate paid on covered bonds, expressed as a percentage of bond's face value
LT Issuer Rating	CRA	Long-term ratings assess the default risks for each category of a bank's financial instruments with a residual term-to-maturity of more than one year
ST Issuer Rating	CRA	Short-term ratings assess the default risks for each category of a bank's financial instruments with a residual term-to-maturity of less than one year
Legal and regulatory framework analysis	CRA	A qualitative assessment of legislative and regulatory rules of the covered bonds program
Liquidity and refinancing risk	CRA	A qualitative assessment of regulatory requirements for liquidity and refinancing risk of the covered bonds program
First rating uplift	CRA	The rating after adding up the notches from Legal and regulatory framework analysis and Liquidity and refinancing risk with LT Issuer rating
Cover pool and cash flow analysis	CRA	The quantitative assessment of the cover assets and covered bonds at different rating-level stressed scenarios
Second rating uplift	CRA	The rating after adding up the notches from cash-flow analysis with 1st rating uplift (only effective if the rating from cash-flow analysis is higher than the 1st rating uplift)
Metrics date	CRA	The date on which CRA assigned the initial / follow-up rating of the covered bond program
Rating Case Default Rate (RDR)	CRA	Stressed default rate of the cover assets represented by the base case stressed scenario
Rating Case Recovery Rate (RRR)	CRA	Stressed recovery rate of the defaulted assets represented by the base case stressed scenario
Expected Loss	CRA	Stressed loss rate of the cover assets represented by the base case stressed scenario. The expected loss rate has been calculated as $[\text{RDR} * (1 - \text{RRR})]$ [%]
Rating Case Breakeven OC	CRA	The required stressed OC level compatible with the base case rating
Average Seasoning	Issuer	Average length of the loans from the origination date to the cut-off date in months
Loan Size	Issuer	Average size of the loans (i.e. Total value of cover assets / Number of loans)
LTV	Issuer	The loan-to-value (LTV) is the ratio of a loan to the value of the property securing the loan
LEI	CRA	Legal Entity Identifier (LEI) enables unique identification of legal entities in financial transactions
Arrears Distribution	Issuer	The distribution of arrears of the cover assets with respect to each asset class
Seasoning Distribution	Issuer	The distribution of seasoning of the cover assets with respect to each asset class
Asset liability Profile	CRA	The maturity structure of the cover assets and liabilities
% Residential Loans	Issuer	Outstanding value of loans that are secured by the residential property expressed as % of total outstanding loans in the cover pool
% Commercial Loans	Issuer	Outstanding value of loans that are secured by the commercial property expressed as % of total outstanding loans in the cover pool
Fixed Coupon	Issuer	All assets and liabilities in the covered bond program that yield a fixed interest rate
Floating Coupon	Issuer	All assets and liabilities in the covered bond program that have variable interest rates
EIEURxM	Reuters	Euro x Month EURIBOR
EURSWEXY	Reuters	Euro x Year Interest Rate Swap Fixing

Disclaimer

© Creditreform Rating AG, 2020. This report is protected by copyright. Any commercial use is prohibited without prior written permission from Creditreform Rating AG. Only the full report may be published in order to prevent distortion of the report's overall assessment. Excerpts may only be used with the express consent of Creditreform Rating AG. Publication of the report without the consent of Creditreform Rating AG is prohibited. Only ratings published on the Creditreform Rating AG web pages remain valid.

We have assumed that the publicly available information, and the documents and information provided to us by the client are complete and accurate and that the copies provided to us represent the full and unchanged contents of the original documents. Therefore, Creditreform does not and cannot independently verify or validate information in every instance during the rating process. Further, Creditreform Rating AG assumes no responsibility for the true and fair representation of the original information.

Future events are uncertain, and forecasts are necessarily based on assessments and assumptions. The information in this report and in other types of credit opinions by Creditreform are provided "as is" without representation or warranty of any kind. This rating is therefore no statement of fact, but an opinion. No representation or warranty, express or implied, as to the accuracy, timeliness, completeness, merchantability or fitness for any particular purpose of any such information is made by Creditreform in any form or manner whatsoever. For this reason, Creditreform Rating AG or its directors, officers, employees, independent contractors, agents, representatives, licensors or suppliers cannot be held liable for the consequences of decisions made on the basis of any of their ratings or assumptions and assessments expressed in this report. Neither should ratings, assumptions or assessments expressed in this report, be construed as recommendations for investors, buyers or sellers. They should only be used by market participants (entrepreneurs, bankers, investors etc.) as one factor among others when arriving at corporate or investment decisions. Ratings or assumptions and assessments expressed in this report are not meant to be used as substitutes for one's own research, inquiries and own assessments.

ANY RATING PERFORMED BY CREDITREFORM RATING AG IS SUBJECT TO THE CREDITREFORM RATING AG CODE OF CONDUCT, WHICH HAS BEEN PUBLISHED ON THE WEB PAGES OF CREDITREFORM RATING AG. IN THIS CODE OF CONDUCT, CREDITREFORM RATING AG COMMITS ITSELF – SYSTEMATICALLY AND WITH DUE DILIGENCE – TO ESTABLISH ITS INDEPENDENT AND OBJECTIVE OPINION AS TO THE SUSTAINABILITY, RISKS AND OPPORTUNITIES CONCERNING THE ENTERPRISE OR THE ISSUE UNDER REVIEW.