

# Creditreform Covered Bond Rating

Norddeutsche Landesbank Girozentrale

Public Sector Covered Bond Program

## 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 (31,39%)
Nominal value	EUR 11.387,51 m.		Committed (2,00%)
Cover pool value	EUR 14.961,94 m.		Fix (95,97%)
WAL maturity covered bonds	6,91 (Years)	Covered bonds coupon type	Floating (4,03%)
WAL maturity cover pool	6,77 (Years)		Other (0,00%)
Cut-off date Covered Pool Information:	30.06.2020		

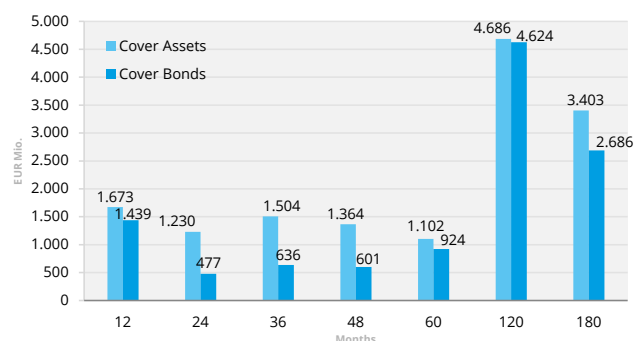
## Rating Overview

Rating Summary		Credit Risk Metrics	
Issuer	Norddeutsche Landesbank Girozentrale	Metrics date	10.12.2018
LT Issuer Rating	BBB-	Rating Case Default Rate	12,07%
ST Issuer Rating	L3	Rating Case Recovery Rate	40,48%
+Legal and regulatory framework analysis	+4 Notches	Expected Loss	7,19%
+Liquidity and refinancing risk	+1 Notch	Rating Case Breakeven OC	10,94%
= Rating after 1st uplift	A+	Program Key Counterparties	
Cover Pool & cash flow analysis	AA	Servicer	NA
+ 2nd rating uplift	+2 Notches	Account Bank	NA
Rating covered bond program / Outlook	<b>AA "Watch Negative"</b>	Sponsor	NA

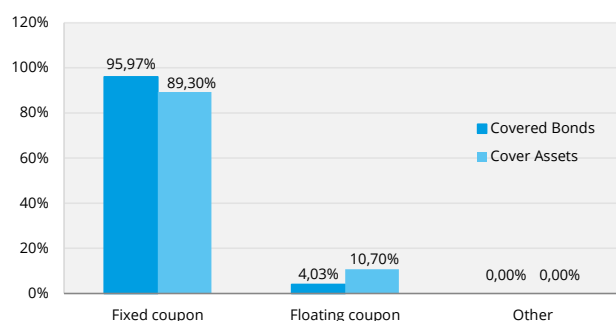
## Cover Assets Composition

General Information		Breakdown by type of Assets	
Cover Pool Balance	EUR 14.961,94 m.	Loans	EUR 10.349,94 m.
Average Seasoning	NA	Bonds	EUR 130,00 m.
Total number of exposures	4.156	Other	EUR 3.660,17 m.
Distribution by type of asset		Distribution by Debtor size	
Mortgages	EUR 0,00 m.	Average Size Loans (EUR k.)	3.402
Public Sector	EUR 14.140,12 m.	Sovereigns (EUR m.)	1.102
Shipping	EUR 0,00 m.	Regional/federal authorities (EUR m.)	3.589
Substitute Assets	EUR 821,82 m.	Local/municipal authorities (EUR m.)	6.152
Other	EUR 0,00 m.	Others (EUR m.)	3.296

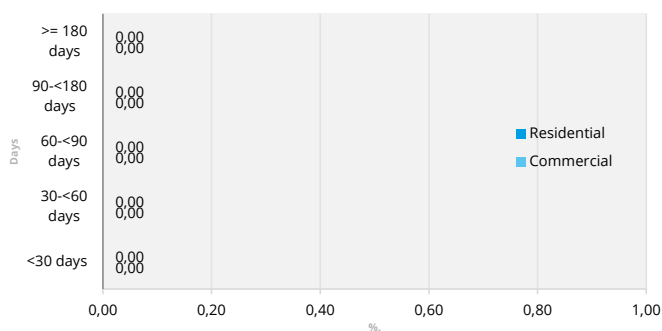
Asset-liability Profile



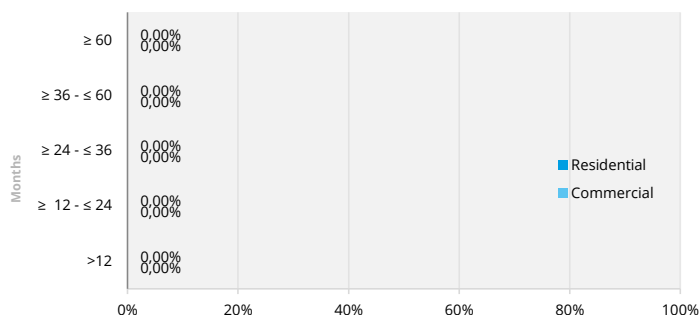
Interest Rate



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	11.376,80 m.	14.785,35 m.	Baden-Wuerttemberg	6,69%	
AUD	0,00 m.	0,00 m.	Bavaria	5,63%	
BRL	0,00 m.	0,00 m.	Berlin	7,31%	
CAD	0,00 m.	0,00 m.	Brandenburg	0,81%	
CHF	0,00 m.	0,00 m.	Bremen	4,08%	
CZK	0,00 m.	0,00 m.	Hamburg	2,37%	
DKK	0,00 m.	0,00 m.	Hesse	6,12%	
GBP	0,00 m.	0,00 m.	Mecklenburg-Western Pomerania	2,42%	
HKD	0,00 m.	0,00 m.	Lower Saxony	33,51%	
JPY	0,00 m.	13,13 m.	North Rhine-Westphalia	16,02%	
KRW	0,00 m.	0,00 m.	Rhineland-Palatinate	3,00%	
NOK	0,00 m.	0,00 m.	Saarland	1,67%	
PLN	0,00 m.	0,00 m.	Saxony	0,62%	
SEK	0,00 m.	0,00 m.	Saxony-Anhalt	2,67%	
SGD	0,00 m.	0,00 m.	Schleswig-Holstein	5,92%	
USD	10,72 m.	163,46 m.	Thuringia	1,16%	
Other	0,00 m.	0,00 m.			

Swap Counterparties		
Name	Type of arrangement	LEI
NA	NA	NA
Swap Agreements		
Interest Rate Swap		NA
Currency Swap		NA

#### ISIN Lists

Issuer	ISIN	Coupon Type	Coupon Rate (%)	Issue date	Maturity date
Norddeutsche Landesbank Girozentrale	DE000BRL3124	Fix	2,07	02.10.2013	04.10.2022
Norddeutsche Landesbank Girozentrale	DE000NLB2Q44	Fix	1,00	04.10.2017	29.11.2021
Norddeutsche Landesbank Girozentrale	DE000NLB1YY5	Fix	4,06	27.12.2012	27.12.2022
Norddeutsche Landesbank Girozentrale	DE000BRL3256	Fix	0,83	01.12.2014	01.12.2023
Norddeutsche Landesbank Girozentrale	DE000NLB8CC2	Fix	2,27	25.04.2014	25.04.2029
Norddeutsche Landesbank Girozentrale	DE000NLB2JX6	Fix	1,13	18.05.2015	18.07.2025
Norddeutsche Landesbank Girozentrale	DE000BRL3041	Fix	2,00	24.02.2013	24.02.2023
Norddeutsche Landesbank Girozentrale	DE000BRL3215	Fix	1,20	21.05.2014	22.11.2021
Norddeutsche Landesbank Girozentrale	DE000NLB85X6	Fix	0,25	28.10.2016	28.10.2026
Norddeutsche Landesbank Girozentrale	DE000NLB1YW9	Fix	4,03	27.12.2012	28.12.2020
Norddeutsche Landesbank Girozentrale	DE000NLB2F88	Fix	1,50	28.05.2013	28.05.2021
Norddeutsche Landesbank Girozentrale	DE000BRL2894	Fix	3,25	07.12.2010	07.12.2020
Norddeutsche Landesbank Girozentrale	DE000BRL3165	Fix	2,00	16.01.2014	15.02.2022
Norddeutsche Landesbank Girozentrale	DE000NLB1LD6	Fix	2,13	24.04.2013	24.04.2028
Norddeutsche Landesbank Girozentrale	DE000NLB2DM2	Fix	3,45	07.01.2011	07.01.2021
Norddeutsche Landesbank Girozentrale	DE000BRL3298	Fix	1,00	15.05.2015	15.05.2025
Norddeutsche Landesbank Girozentrale	DE000NLB8EY2	Floating	0,00	18.11.2014	18.11.2024
Norddeutsche Landesbank Girozentrale	DE000BRL3140	Fix	2,00	12.12.2013	12.12.2022
Norddeutsche Landesbank Girozentrale	DE000NLB2QS1	Floating	0,00	27.09.2017	27.09.2020
Norddeutsche Landesbank Girozentrale	DE000NLB1EN0	Floating	0,00	30.07.2010	27.07.2020
Norddeutsche Landesbank Girozentrale	DE000NLB2C16	Fix	3,25	23.11.2010	23.11.2020
Norddeutsche Landesbank Girozentrale	DE000BRL3264	Fix	1,00	11.12.2014	11.12.2024
Norddeutsche Landesbank Girozentrale	DE000NLB8DC0	Floating	0,00	30.07.2014	29.07.2022
Norddeutsche Landesbank Girozentrale	DE000NLB2Q36	Fix	0,38	09.10.2017	09.10.2024
Norddeutsche Landesbank Girozentrale	DE000BRL3058	Floating	0,00	14.03.2013	14.03.2023
Norddeutsche Landesbank Girozentrale	DE000NLB1YX7	Fix	4,05	27.12.2012	27.12.2021
Norddeutsche Landesbank Girozentrale	DE000BRL3223	Fix	1,30	23.05.2014	23.05.2022
Norddeutsche Landesbank Girozentrale	DE000NLB8739	Fix	0,63	18.01.2017	18.01.2027
Norddeutsche Landesbank Girozentrale	DE000NLB2FY2	Floating	0,00	30.04.2013	30.04.2021
Norddeutsche Landesbank Girozentrale	DE000BRL2985	Floating	0,00	20.07.2012	20.07.2020
Norddeutsche Landesbank Girozentrale	DE000BRL3207	Fix	1,00	21.05.2014	23.11.2020
Norddeutsche Landesbank Girozentrale	XS1114351973	Floating	0,00	26.09.2014	26.09.2022
Norddeutsche Landesbank Girozentrale	DE000NLB1VT1	Floating	0,00	15.05.2008	15.05.2023
Norddeutsche Landesbank Girozentrale	DE000NLB2DX9	Fix	3,25	18.01.2011	18.01.2021
Norddeutsche Landesbank Girozentrale	DE000BRL3306	Floating	0,00	23.05.2016	25.05.2021
Norddeutsche Landesbank Girozentrale	DE000BRL2878	Fix	2,75	14.10.2010	14.10.2020
Norddeutsche Landesbank Girozentrale	DE000BRL3157	Fix	2,15	22.12.2013	22.12.2023
Norddeutsche Landesbank Girozentrale	DE000NLB2QZ6	Floating	0,00	02.10.2017	28.09.2022
Norddeutsche Landesbank Girozentrale	DE000NLB2DK6	Fix	3,50	23.12.2010	23.12.2020
Norddeutsche Landesbank Girozentrale	DE000BRL3280	Fix	0,75	25.02.2015	25.02.2025
Norddeutsche Landesbank Girozentrale	DE000NLB8E83	Fix	0,75	15.12.2014	17.04.2023

#### 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

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