MOODY'S
INVESTORS SERVICE

CREDIT OPINION
28 January 2020

New Issue

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NORD/LB Luxembourg S.A. CBB - Renewable Energy Covered Bonds

New Issue Report – Luxembourgish covered bonds

Ratings

Exhibit 1

Cover Pool (€)	Ordinary Cover Pool Assets	Covered Bonds (€)	Rating
358,280,218	Renewable Energy Assets	300,000,000	Aa2

Source: Moody's Investors Service

Closing date
28 January 2020

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Summary

The covered bonds issued by NORD/LB Luxembourg S.A. Covered Bond Bank (NORD/LB CBB or the issuer) under the renewable energy covered bond programme are full recourse to the issuer and secured by a cover pool of assets consisting entirely of renewable energy assets mainly in Ireland (61.3%), France (17.6%), United Kingdom (12.6%) and Germany (7.2%).

Credit strengths include the full recourse of the covered bonds to the issuer (counterparty risk (CR) assessment A3(cr)) and the support provided by the Luxembourgish covered bond legislation.

Credit challenges include the high level of dependency on the issuer. The market value of these assets may be subject to high volatility in case the issuer ceases to service the payments on the covered bonds.

Our credit analysis takes into account the cover pool's credit quality, which is reflected in the collateral score of 31.3%, and the current over-collateralisation (OC) of 19.4% which exceeds the OC of 8.5% that is consistent with the Aa2 rating.

Credit strengths

» ***Recourse to the issuer*:** The covered bonds are full recourse to NORD/LB CBB (A3(cr)). (See "Covered bond description")

» ***Support provided by the Luxembourgish legal framework*:** The covered bonds are governed by the Luxembourgish covered bond law, which provides for the issuer's regulation and supervision and sets certain minimum requirements for the covered bonds and the cover pool. The act requires the issuer to maintain a cover pool with a value of at least 102% of the value of the covered bonds, both on nominal and present value basis. Following an issuer default, the covered bondholders will benefit from a cover pool administrator that acts independently from the issuer's insolvency administrator. The cover pool administrator has a clear mandate to act in the interests of the covered bond holders and considerable flexibility to manage the covered bond programme. (See "Moody's related publications: New legal framework offers dual recourse for renewable energy funding")

» ***High credit quality of the cover pool*:** The covered bonds are supported by a cover pool of highly diversified assets located in highly rated countries. All of the assets are claims against renewable energy assets in Ireland (61.3%), France (17.6%), UK (12.6%), Germany (7.2%). The collateral quality is reflected in the collateral score, which is currently 31.3%. (See "Cover pool analysis")

» ***Refinancing risk, while significant, mitigated by structural features*:** Following a covered bond (CB) anchor event, refinancing risk would be mitigated by (i) the soft-bullet nature of the covered bonds, and (ii) the obligation of the issuer 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. 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. (See "Covered bond analysis")

» ***180 day liquidity facility:*** The issuer is obliged to have enough liquid assets to cover the difference between incoming and outgoing cash flow for a period of at least 180 days. As the covered bonds are soft-bullet, this facility will cover mainly interest payments due. By operation of law, following a suspension of payments or liquidation proceeding being imposed on the issuer, the covered bond programme is expected to continue as part of a "bank in limited activity" with the administrator having the ability to issue covered bonds.

» ***Interest rate and currency risks*:** Interest rate risk is mitigated by the 2.0% OC requirement in terms of nominal and present value. The vast majority of the assets are and all of the liabilities are expected to be denominated in euros. (See "Covered bond analysis")

» ***Commingling risk mitigated*:** There is no provision in the covered bond law dealing with commingling risk. However, the issuer has set up, on a voluntary basis, separate accounts at a highly rated Luxembourgish bank for the collection of cash flows from the cover pool. (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 the following concentrations: (1) geographical concentration, with the majority of the renewable assets based in Ireland; and (2) significant obligor concentration, with the 10 largest obligors accounting for 82.1% of the total cover pool assets. (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")

» ***Set-off risk:*** The framework does not clearly exclude borrowers from exercising set-off rights against cover pool assets. Borrowers might, for instance, attempt to set off rights under other contracts used in the renewable energy infrastructure financings (REIFs) against the borrower's loan obligations in the cover pool, resulting in losses to the cover pool.(See "Covered bond analysis")

Key characteristics

Exhibit 2

Covered bond characteristics

Moody's Programme Number:	467
Issuer:	NORD/LB Luxembourg S.A. Covered Bond Bank
Covered Bond Type:	Renewable Energy Assets
Issued under Covered Bonds Law:	Yes
Applicable Covered Bonds Law:	Luxembourg Covered Bond Law
Entity used in Moody's TPI analysis:	NORD/LB Luxembourg S.A. Covered Bond Bank
CR Assessment:	A3(cr)
CB Anchor:	CR assessment +1 notch
Issuer rating/ LT deposit rating	A3
Total Covered Bonds Outstanding:	€ 300,000,000
Main Currency of Covered Bonds:	EUR (100.0%)
Extended Refinance Period:	Yes
Principal Payment Type:	Soft bullet (an extension of 12 months)
Interest Rate Type:	Fixed rate covered bonds (100.0%)
Committed Over-Collateralisation:	2.0% mandatory minimum OC, on nominal and net present value basis
Current Over-Collateralisation:	19.4% (on a nominal basis)
Intra-group Swap Provider:	No
Monitoring of Cover Pool:	Approved Statutory Auditor
Trustees:	PriceWaterhouseCoopers
Timely Payment Indicator:	Improbable
TPI Leeway:	1

Sources: Moody's Investors Service, issuer data

Exhibit 3
Cover pool characteristics

Size of Cover Pool:	€ 358,280,218
Main Collateral Type in Cover Pool:	Renewable energy assets (100.0%)
Main Asset Location of Ordinary Cover Assets:	Ireland (61.3%), France (17.6%), United Kingdom (12.6%), Germany (7.2%)
Main Currency:	Euro (87.4%)
Loans Count:	25
Number of Borrowers:	20
Concentration of 10 Biggest Borrowers:	82.1%
Interest Rate Type:	Floating rate assets (98.8%), Fixed rate assets (1.2%)
Collateral Score:	31.3%
Cover Pool Losses:	34.1%
Further Cover Pool Details:	See 'Cover pool description'
Pool Cut-off Date:	31 August 2019

Sources: Moody's Investors Service, issuer data

Exhibit 4
Transaction counterparties

Counterparty Type	Transaction Counterparty
Sponsor	n/a
Servicer	NORD/LB Luxembourg S.A. Covered Bond Bank
Back-up Servicer	n/a
Back-up Servicer Facilitator	n/a
Cash Manager	n/a
Back-up Cash Manager	n/a
Account Bank	n/a
Standby Account Bank	n/a
Account Bank Guarantor	n/a

Sources: Moody's Investors Service, issuer data

Covered bond description

The covered bonds issued under the NORD/LB Luxembourg S.A. Covered Bond Bank - Renewable Energy Covered Bond programme are full recourse to the issuer. Upon a CB anchor event, covered bondholders would have access to a cover pool of renewable assets loan receivables. A CB anchor event occurs when the issuer, or another entity in the issuer group that supports the issuer, ceases to service the payments on the covered bonds.

Structure description

The bonds

All covered bonds are expected to be soft bullet repayment, with an extension period of 12 months.

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)

The overcollateralisation is 19.4% and exceeds the 8.5% which is the minimum OC consistent with the Aa2 rating.

The current covered bond rating relies on an OC level that exceeds the minimum legal requirement by the Luxembourgish covered bond law. The act requires that the OC exceed the principal balance of the bonds by 2% (on both nominal and NPV basis). Based on data as of 31 August 2019, 8.5% of OC is sufficient to maintain the current covered bond rating, which is higher than committed OC. 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 new legal framework enabling Luxembourg banks to issue covered bonds backed by a pool of renewable energy assets. Comparing Luxembourg's covered bond legislation to other typical covered bond frameworks, the following aspects are relative strengths:

- The issuer is regulated and supervised by the financial services authority of Luxembourg (Commission de Surveillance du Secteur Financier or CSSF). The CSSF has appointed an independent Approved Statutory Auditor (ASA) that performs cover pool monitor functions
- The law stipulates a minimum 2.0% OC required on a nominal and present value basis. In addition, the issuer must ensure that the overall interest income must at any time cover the overall amount of interest on the covered bonds
- The law requires issuers to cover potential liquidity gaps over the next 180 days between payments expected to be received from the cover pool receivables and payments due under the outstanding covered bonds
- Upon a suspension of payments or liquidation proceeding being imposed on the issuer, the same will be divided by operation of law into two parts: (i) a solvent part, the so-called bank “in limited activity”, containing the (different categories of) covered bonds which, together with their cover pools, constitute as many separate and distinct patrimonial compartments; the purpose of the bank in limited activity is the management of the compartments and the full repayment at maturity of the covered bonds; and (ii) an insolvent part containing the remaining estate related to the accessory activity of the bank, to which the suspension of payments or liquidation proceeding would apply
- Court appointed administrator(s) in charge of the management of the bank in limited activity – which would be a different person than the insolvency administrator – can take all necessary acts of management in the interest of full repayment of the covered bonds at maturity including: (i) issuing new covered bonds; (ii) subject to CSSF's approval, outsourcing to a EU/EEA/ OECD licensed and supervised bank the management of the covered bond programme and the realization of the cover assets; (iii) subject to CSSF's approval, transfer all covered bonds with their respective cover pool to a bank similar in nature and subject to equivalent supervision as a Luxembourgish bank
- The framework provides a comprehensive definition of the types of REIFs that are eligible for inclusion in cover pools, which will ensure clarity around the make-up of cover bond assets. In particular, only loans funding projects recognised as genuine renewable energy sources by European directive will be eligible for cover pools. This criteria protects against the inclusion of loans from less established sources that may carry more execution or regulatory risk.
- The secondary regulation is strict regarding the treatment of assets in arrears. Loans that are in arrears by more than 90 days in respect of principal payments by more than the equivalent of 1% of the outstanding notional amount are not considered anymore for the coverage calculation.

The following items are considered relative weaknesses from a credit perspective:

» Foreign assets are eligible for the cover pool if located in a country which is part of the European Union (EU), the European Economic Area (EEA), the Organisation for Economic Cooperation and Development (OECD) or, subject to the conditions below, that is not part of the OECD. However, there are currently no cover pool assets outside of Western and Central Europe.

» The covered bond law does not exclude set-off in relation to cover pool assets and set-off risk may arise under the general principles of Luxembourg law, should the issuer enter into transactions with borrowers outside the cover pool (e.g. deposits, bonds, derivative contracts)

» No provision of the covered bond legislation deals with commingling risk. Prior to an issuer default, payments made from the cover assets are collected on a cash account, but not necessarily all cash flows on cover assets are separated from all other cash collections made by the issuer. Upon the insolvency of the issuer, the administrator would have to separate these cash flows before payment is made to covered bondholders

Set-off risk is limited as the issuer is a specialist credit institution, not offering deposit accounts or borrower-level swap arrangements to cover pool debtors. Commingling risk is addressed as the issuer maintains separate accounts at a third-party Luxembourgish bank for all cover pool related cash in- and outflows.

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

NORD/LB CBB is a wholly-owned subsidiary of Norddeutsche Landesbank Girozentrale (NORD/LB; deposits A3; adjusted baseline credit assessment ba1; CR assessment A3(cr)), one of seven "Landesbanks" in Germany. (For a description of the issuer's rating drivers, see Credit Opinion, published March 2019 and Moody's press release detailing the rationale for the recent rating upgrade, published on 13 January 2020.)

The issuer's CR assessment is A3(cr), which is positioned at the same level as the parent's, reflecting its high integration into the NORD/LB group.

The rating we base our analysis on is what we call the "CB anchor," which for covered bond programmes under an EU covered bond law 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 Luxembourgish covered bonds law, which specifies what types of assets are eligible. (See Moody's related publications: "New legal framework offers dual recourse credit strength for renewable energy funding")

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")

Refinancing-positive aspects of this covered bond programme include:

» Upon issuer default, a cover pool administrator will take over management responsibility of the covered bond programme with a view to protect covered bond investors. The administrator has, inter alia, the ability to realize the cover assets and transfer the covered bonds

» We expect that, following a CB anchor event, the covered bond programme will continue as part of a "bank in limited activity". This entity may preserve its banking license, a requirement to access central bank funding. Further, the administrator has the ability to issue covered bonds

» The good credit quality of the cover pool, which is reflected in the collateral score (31.3%). A higher credit quality of the cover pool will lead to a lower write-off for losses and lower refinancing margins applied, all other variables being equal

» All covered bonds are expected to be of soft-bullet nature with an extension of 12 months.

» The law requires the issuer to adhere to a 180 day liquidity cover following the concept of the covered bond regulation. As such, the issuer covers potential liquidity gaps over the next 180 days between payments expected to be received under the cover pool assets and the payments due under the outstanding covered bonds. When determining the payment obligations under the covered bonds, the law allows to consider the 12-month extension period.

» The floating-rate nature of all loans in the cover pool. Interest risk may be limited by the variable nature of the assets in the cover pool.

Refinancing-negative aspects of this covered bond programme include:

» The lack of depth of the Luxembourgish's covered bond market implies that the likelihood of government and financial market support is lower than in other markets where covered bonds form an integral part of the banks' funding system. The number of banks focused on originating the same type of renewable energy sector related receivables funded by covered bonds is limited, limiting the number of alternative covered bond banks that would take over the covered bond programme as a whole.

» The legal framework requires a collateral valuation and establishes loan-to-value (LTV) thresholds that limit the cover pool eligibility to the loan part that corresponds to the respective LTV limit and the respective collateral value. We consider this as positive when we assess the credit risk of the cover assets (please see section "Cover pool description" below) as the recovery is higher to the loan part in the cover pool compared to that of the whole loan. The reason for the higher recovery is that proceeds from an enforcement of the property are allocated first to the part of the loan that is in the cover pool. On the other hand, including loan parts instead of whole loans might have a negative impact regarding the refinancing risk. After issuer default it might be more difficult to sell cover pool assets that only partially belong to the cover pool, while the other loan part would belong to the issuer's insolvency estate. In such a scenario, in order to sell the entire loan receivable, the administrator of the issuer's insolvency estate would need to agree to a sale. This could negatively impact the timing and the result of sale of receivables.

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 5
Overview of assets and liabilities

	WAL Assets (Years)	WAL Liabilities (Years)	Assets (%)	Liabilities (%)
Fixed rate	3.2	5.0	1.2%	100.0%
Variable rate	7.4	n/a	98.8%	0.0%

Sources: Moody's Investors Service, issuer data

In the event of issuer insolvency, we currently do not assume that the public administration board 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:

» The currency mismatch between assets and liabilities is largely matched. The cover pool assets are denominated in two different currencies with the majority of assets being in Euro (87.4%) and the remaining in GBP (12.6%) while the bonds are expected to be denominated in Euro.

Aspects of this covered bond programme that are market-risk negative include:

» The cover pool assets are mostly variable rate, while the covered bonds are expected to be fixed rate. That leads to an exposure to interest rate risk.

» The possibility of material change of the nature of the programme by the issuer. For example, the issuer may issue fixed-rate covered bonds denominated in currencies other than Euro. This can introduce material interest rate and/or currency mismatches

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 Improbable to these covered bonds.

Based on the current TPI of Improbable, the TPI leeway for this programme is one notch. This implies that we might downgrade the covered bonds' rating because of a TPI cap if we were to lower the CB anchor by 2 notches, all other variables being equal.

The TPI-positive aspects of this covered bond programme include:

» The strength of the Luxembourgish Covered Bond Law, including:

  – At the time of issuer's bankruptcy, the cover pool administrator will take over management responsibility of the covered bond programme with a view to protect the interest of covered bond investors. The cover pool administrator will act independently from the issuer's insolvency administrator. Having an independent cover pool administrator may reduce potential conflicts of interest between the covered bondholders and other creditors

  – We do not expect a moratorium affecting the covered bonds upon a CB anchor event as the “bank in limited activity” is not subject to a suspension of payment

» The soft-bullet nature of the covered bonds. In addition, the issuer covers on an ongoing basis 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. Although the latter doesn't take into consideration principle payments due to the soft-bullet nature of the covered bonds, it adds liquidity for interest rate payments due under the covered bonds.

» Commingling risk is mitigated as the issuer voluntarily maintains separate accounts for the cover pool at a third-party Luxembourgish bank.

TPI-negative aspects of this covered bond programme include:

» The lack of depth of the Luxembourgish's covered bond market implies that the likelihood of government and financial market support is lower than in other markets where covered bonds form an integral part of the banks' funding system.

» This is the first covered bond programme backed by renewable energy loans. In case of issuer default, it will therefore not be possible to transfer the cover pool and the outstanding covered bonds to another covered bond issuer. This is regularly an option in more established covered bond markets with a larger number of active issuers.

» Currency and interest rate risks could materialize following a CB anchor event, exposing the programme to the crystallisation of marked-to-market losses and unexpected changes to cash flow structures due to currency and interest rate volatility.

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, the Luxembourg covered bond law prescribes that, prior to an issuer default, the global interest income resulting from the assets in the cover pool must at all time cover the global amount of interest pertaining to the covered bonds and the issuer maintains a minimum over-collateralisation of 2%. Further, the issuer is required to cover potential liquidity gaps for the next 180 days, in line with the Luxembourg covered bond legislation.

All covered bonds are expected to be soft-bullet with an extension period of 12 months. This means that no principle payment is due for at least 12 months in case of a CB anchor event.

After a CB anchor event, the administrator has the ability to sell a portion of the cover pool to make timely payments on the bonds or may be able to raise funding as the “bank with limited” activity retains a banking licence.

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 31 August 2019

As of 31 August 2019, the cover pool consisted entirely of renewable energy sector loans. The cover pool assets total €358.3 million on a nominal basis.

Although the legal framework allows a wider variety off REIF assets to be included in cover pools, the cover pool contains only financings related to onshore windfarms (85.6%) and solar power (14.4%). 17.4% of the financings are under construction.

The assets backing the renewable energy projects are primarily in Ireland (61.3%), while the remainder are mainly in France, UK and Germany.

The 10 largest obligors account for 82.1% of the total cover pool assets. All assets are performing.

The legal framework limits the leverage of the financings by way of specifying an LTV threshold for cover pool assets. If a loan exceeds such threshold, only a part of the loan is included in the cover pool; however, proceeds from the sale of the property securing the loan will be first allocated to the part of the loan which is in the cover pool. This in turn can be expected to lead to a higher recovery rate in case of defaults compared to a situation where the entire loan forms part of the cover pool. The LTV threshold is determined on a loan-by-loan basis and depends on several parameters of the assets, for details see report “New legal framework offers dual recourse credit strenght for renewable energy funding”. Consequently, in our modelling we have increased the recovery assumption for loans which are only partially included in the cover pool.

For a detailed description about the risk factors specific to this asset class compared to more traditional covered bond assets see report “New legal framework offers dual recourse credit strenght for renewable energy funding”.

Exhibits 6 and 7 show more details about the cover pool characteristics.

Residential mortgage loans

Exhibit 6
Cover pool summary

Overview		Specific Loan and Borrower characteristics	
Asset Type	Renewable Energy	Bullet loans	0.0%
Asset Balance	358,280,218	Fixed rate loans	1.2%
WA Remaining Term (months)	161	Loans in non-domestic currency	12.6%
WA Seasoning (months)	13		
Number of borrowers	20	**Performance**	
Number of loans	25	Loans / bonds in arrears (≥ 2months - < 6months):	0.0%
Exposure to 10 largest borrowers	82.1%	Loans / bonds in arrears (≥ 6months - < 12months):	0.0%
Averal exposure to borrowers	17,914,011	Loans / bonds in arrears (≥ 12months):	0.0%
		Loans / bonds in a foreclosure procedure:	0.0%

Sources: Moody's Investors Service, issuer data

Exhibit 7
Cover pool characteristics

Exhibit A

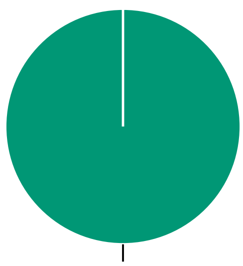
Borrower type by country

Borrower type by country	Ireland	France	UK	Germany	Sweden	Grand Total
Solar	0.0%	8.4%	0.0%	6.0%	0.0%	14.4%
Wind onshore	61.3%	9.2%	12.6%	1.2%	1.3%	85.6%
Grand Total	61.3%	17.6%	12.6%	7.2%	1.3%	100.0%

Sources: Moody's Investors Service, issuer data

Exhibit B

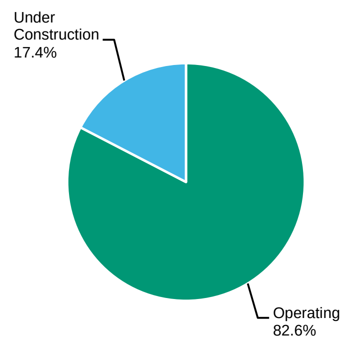
Percentage of Renewable energy assets



Sources: Moody's Investors Service, issuer data

Exhibit C

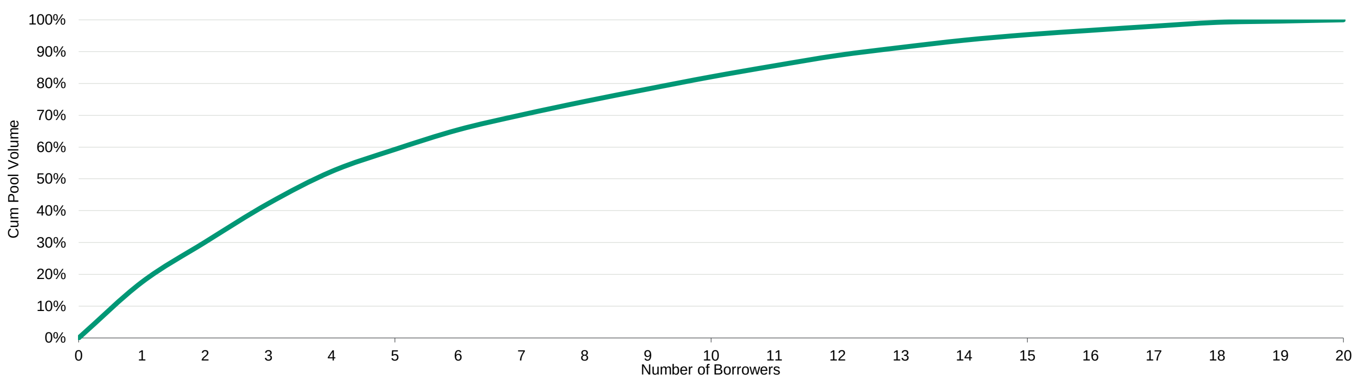
Operating state



Sources: Moody's Investors Service, issuer data

Exhibit D

Borrower concentration



Sources: Moody's Investors Service, issuer data

Substitute assets

The law allows for the inclusion of substitute assets which can be used for liquidity management. As common in the covered bond market, we expect that high quality and highly liquid assets are used as substitute assets, we will report on the details regarding these assets in our performance overview reports for this programme.

Substitution risk
Exposure to decisions made by the issuer in its discretion as manager of the cover pool creates additional risk. For example, before a CB anchor event, the issuer may remove assets from the cover pool and/or add new assets to the cover pool. Such actions could negatively affect the value of the cover pool.

As with most covered bonds in Europe, there are few contractual restrictions on the future composition of the cover pool, creating substitution risk. While the asset type is limited to REIF assets, the legal framework only imposes, in line with the framework for Luxembourgish public-sector covered bonds, a few restrictions on the location of the assets (see "Moody's related publications: New legal framework offers dual recourse credit strength for renewable energy funding").

Cover pool monitor
Pursuant to the Luxembourg law, a cover pool monitor (Approved Statutory Auditor) has been appointed by Luxembourg's financial services authority (CSSF) to monitor the various operations with respect to the cover pool. The cover pool monitor, amongst other things, supervises the recording of the cover pool assets into the cover pool register and may refuse such recording if any irregularities are detected. Similarly, the cover pool monitor may refuse the issue of covered bonds or the de-registration of assets from the pool if the over-collateralisation would as a result fall below the legally required level of 2.0%.

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 renewable energy assets 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 and country levels, as well as the credit quality of the individual borrowers. To model the credit quality of the borrower, we calculated credit estimates for each borrower. In addition, in case a loan is only partially included, we have adjusted the recovery rate assumption to reflect that the loan part included in the pool receives proceeds first in case the property is enforced.

From a credit perspective, Moody's views the following characteristics as positive:

» We have assigned credit estimates to a large part of the individual obligors. The obligors are generally of good credit quality

» All assets are performing and not in arrears as of the cut-off date of this report. 82.6% of the financings are operating and not under construction

» A LTV threshold used which is depending on the type of financing and collateral supports the recovery in case of a borrower default.

From a credit perspective, Moody's views the following characteristics as negative:

» The 10 largest obligors account for 82.1% of the cover pool

» Industry concentration: There are currently only projects related to solar and wind in the cover pool.

» Regional concentration: Most of the projects are located in Ireland (61.3%)

Methodology and monitoring
The primary methodologies we use in rating the issuer's covered bonds are "Moody's Approach to Rating Covered Bonds", published in February 2019, and Project Finance and Infrastructure Asset CDOs Methodology, published in December 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.

Moody's related publications

Rating Methodology

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

» Project Finance and Infrastructure Asset CDOs Methodology, December 2019 (1198391)

Special Comments

» Covered Bonds: Sector update – Q3 2019: Covered bonds gain traction in Central and Eastern European markets, October 2019 (1195474)

» Covered Bonds - Luxembourg: New legal framework offers dual recourse credit strength for renewable energy funding, March 2018 (1113622)

» Luxembourg allows covered bonds backed by renewable energy financings, diversifying banks' funding, June 2018 (1130607)

Credit Opinion

» NORD/LB Luxembourg S.A. Covered Bond Bank

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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