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CREDIT OPINION
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NORD/LB Luxembourg S.A. Covered Bond Bank: Public Sector Covered Bonds

Luxembourgish Covered Bonds

Closing Date

2017

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Ratings

Cover Pool (€) per cut-off date	Ordinary Cover Pool Assets	Covered Bonds (€) per cut-off date	Rating
4,046,295,658	Public-Sector Loans	3,239,067,653	Aa1

The ratings address the expected loss posed to investors. Moody's ratings address only the credit risks associated with the transaction. Other non-credit risks have not been addressed, but may have a significant effect on yield to investors

Summary Rating Rationale

We have assigned a definitive long-term rating of Aa1 to the covered bonds issued under the public sector covered bond programme (*the programme*) of NORD/LB Luxembourg S.A. Covered Bond Bank (NORD/LB CBB or *the issuer*; deposits A3; adjusted baseline credit assessment ba1; counterparty risk (CR) assessment A3(cr)). The covered bonds are full recourse to the issuer and secured by a cover pool of assets consisting of public-sector loans and substitute assets eligible under the Covered Bond Law. We have assigned a TPI of Probable to the covered bonds issued by NORD/LB CBB.

The rating takes into account the following factors:

» The credit strength of the issuer (CR Assessment A3(cr)).

» The good cover pool credit quality, which is reflected in the collateral score of 9.7%. The minimum over-collateralisation (OC) level consistent with the Aa1 rating is 16.0%.

» The support provided by the Luxembourgish legal framework.

Credit Strengths

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

» *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 Covered Bond Description.

» *Good credit quality of the cover pool*: The covered bonds are supported by a cover pool of highly diversified assets located in very highly rated countries. The majority of the assets are *kommunalnahe Unternehmen* in Germany (25.6%) and U.S. municipal bonds (23.5%). The majority of assets are not direct claims or guarantees from a state or other territorial authority but finance public undertakings controlled by such authorities. The collateral quality is reflected in the collateral score, which is currently 9.7%. See Cover Pool Analysis.

» *Refinancing risk, while significant, mitigated by structural features and cover pool quality:* 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". The issuer has obliged himself to maintain a 180 day liquidity buffer following the concept of the German Pfandbrief law. The issuer reports 74.6% of the assets eligible for repurchase programme operations with a central bank. These aspects partially mitigate the refinancing risk resulting from all the bonds being hard bullet bonds and improve the chances that excessive discount rates due to a fire-sale of the cover pool may be avoided. See Covered Bonds 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 Structural 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. The dependency on the issuer is magnified as the Luxembourg covered bond law has a relatively wide definition of pubic sector assets that includes public undertakings. Issuer's actions could affect the cover pool's credit quality as well as the overall refinancing risk and market risks. The issuer has the ability, but not the obligation, to increase the over-collateralisation in the cover pool. See Structural Analysis.

» *Significant interest and currency risk*: The programme exhibits significant interest and currency risk. 30.3% of the assets and 15.6% of the liabilities are denominated in U.S. dollar, while euro account for 54.2% of the assets and 76% of the covered bonds. The Luxembourgish covered bond legislation does not prescribe specific stress tests in respect of interest or currency risk. The risks are partially mitigated by swaps that the issuer has arranged with its parent entity, Norddeutsche Landesbank Girozentrale (NORD/LB, A3(cr)). However, we have incorporated into our analysis the expectation that the programme will be exposed to significant interest and currency risk mismatches upon an issuer covered bond anchor event. See Covered Bonds Analysis.

» *Non-EEA assets not benefiting from priority rights*: A significant share of the pool (32%) consists of assets that are located outside the European Economic Area (EEA). The priority right of covered bond investors over cover pool assets outside the EEA may, in some cases, be lost. For more information on Non-EEA Assets, see our Special Comment published July 2014. The Luxembourg covered bond legislation does not specify limits on the amount of non-EEA assets, leaving the possibility for public sector debt from any territorial authority belonging to the Organisation for Economic Cooperation and Development (OECD) forming part of the cover pool without restriction. However, we understand that NORD/LB CBB's new loan origination focus is mainly on EEA countries. See Covered Bonds Analysis.

» *Set-off risk:* Whilst not excluded by the covered bond law, set-off risk appears limited in scope given that the issuer is a specialist credit institution and is not offering deposit accounts to cover pool debtors. See Structural Analysis.

» *Time subordination:* After issuer default, 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 prior to later-maturing covered bonds. This could lead to OC being eroded before any payments are made to later-paying covered bonds. See Covered Bonds Analysis.

Key Characteristics

Exhibit 1

Covered Bonds Characteristics as of 31 March 2016*

Issuer:	**NORD/LB Luxembourg S.A. Covered Bond Bank (A3(cr))**
Covered Bond Type:	Public-Sector Covered Bonds
Issued under Covered Bonds Law:	Yes
Applicable Covered Bonds Law:	Luxembourg Covered Bond Law
Entity used in Moody's EL and TPI analysis	**NORD/LB Luxembourg S.A. Covered Bond Bank**
CR Assessment:	A3(cr)
CB Anchor:	CR assessment +1 notch
Issuer rating:	Baa1
Total Covered Bonds Outstanding:	**EUR 3,239,067,653**
Main Currency of Covered Bonds:	Euro (76%)
Extended Refinance Period:	No
Principal Payment Type:	Hard bullet (no extension period)
Interest Rate Type:	Fixed rate covered bonds (94.0%), variable rate covered bonds (6.0%)
Committed Over-Collateralisation:	2% (mandatory minimum OC), on nominal and NPV basis
Over-Collateralisation as per Pool Data Cut-off Date:	24.9% (on a nominal basis), 26.2% (on NPV basis including marked-to-market of swaps), 23.3% (on NPV basis ignoring marked-to-market of swaps)
Intra-group Swap Provider:	**Norddeutsche Landesbank GZ**
Monitoring of Cover Pool:	Approved Statutory Auditor
Trustees:	PriceWaterhouseCoopers
Timely Payment Indicator:	Probable
TPI Leeway:	2 notches

Source: NORD/LB CBB

Exhibit 2

Cover Pool Characteristics as of 31 March 2016*

Size of Cover Pool:	**EUR 4,046,295,658**
Main Collateral Type in Cover Pool:	Public-sector loans (97.4%), Substitute Assets (2.6%)
Main Asset Location of Ordinary Cover Assets:	Germany (42.3%), USA (24.1%)
Main Currency:	Euro (54.2%), US Dollar (30.3%)
Loans Count:	300 public-sector loans
Number of Borrowers:	160 public-sector borrowers
Concentration of 10 Biggest Borrowers:	25.0% (of public-sector)
WA Remaining Term:	7.7 years (public-sector)
Interest Rate Type:	Fixed rate assets (73.6%), floating rate assets (26.4%)
Collateral Score:	9.7%
Cover Pool Losses:	30.4%
Further Cover Pool Details:	See Cover pool analysis
Pool Data Cut-off Date:	31-Mar-16

Source: NORD/LB CBB

** The key characteristics presented above are per the pool data cut-off date (31 March 2016). Per 27 December 2016, the total covered bonds outstanding amount to EUR 3,678,161,217, backed by a cover pool totalling EUR 4,599,444,843. This translates into a current over-collateralisation of 25.0% on a nominal basis, 25.5% on a net present value basis including the marked-to-market of swap hedging arrangements and 23.6% on a net present value basis ignoring the marked-to-market of swap hedging arrangements. The Moody's rated covered bonds are EUR 3,627,567,653 outstanding per 3 January 2017 with currency exchange rates per data cut-off date.*

Covered Bond Overview

The covered bonds benefit from recourse to both the issuer and the cover pool, as well as the legal framework under the *Luxembourgish covered bond legislation*. Our rating reflects these features.

Covered Bond Description

The covered bonds issued under the public sector covered bond programme of NORD/LB CBB are full recourse to the issuer. Upon a CB anchor event covered bondholders will have access to a cover pool of public-sector loan receivables and substitute assets. 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 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 interests on the covered bonds.

RECOURSE TO COVER POOL AND OVER-COLLATERALISATION

If the issuer becomes insolvent, the covered bondholders will 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 the pool data cut-off date 31 March 2016, the over-collateralisation (OC) in the cover pool is 24.9% on a nominal basis and 26.2% on a net present value basis including the marked-to-market of swap hedging arrangements and 23.3% on a net present value basis ignoring the marked-to-market of swap hedging arrangements.

As of 27 December 2016, the total covered bonds outstanding amount to EUR 3,678,161,217, backed by a cover pool totalling EUR 4,599,444,843. This translates into a current OC of 25.0% on a nominal basis, 25.5% on a net present value basis including the marked-to-market of swap hedging arrangements and 23.6% on a net present value basis ignoring the marked-to-market of swap hedging arrangements.

The issuer has publicly stated to maintain at least an OC level of 22.0% on a nominal and net present value basis. We do not consider this public statement as “committed” OC under our methodology. We consider for our analysis the 2.0% minimum OC as per the Luxembourgish covered bond legislation as “committed”.

The minimum OC level consistent with the Aa1 rating is 16.0%, of which the issuer should provide 2.0% in a “committed” form (numbers in present value basis). These numbers show that Moody's is relying on “uncommitted” OC in its expected loss analysis.

Although the issuer has the ability to increase the OC in the cover pool should the collateral quality deteriorate or market risks rise, 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 Luxembourg's covered bond law (articles 12-1 to 12-12 of the law of 5 April 1993 on the financial sector, as amended). Comparing Luxembourg's covered bond legislation to other typical covered bond frameworks, we identify the following aspects as 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.

» 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 we understand 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;

We consider the following items as relative weaknesses from a credit perspective:

» The cover pool eligibility criteria of Luxembourg's Lettres de Gage Publiques goes beyond direct claims and guarantees from a territorial authority and includes other commitments made by public entities. This includes public undertakings, which means any undertaking over which a state or other territorial authority may directly or indirectly exercise a dominant influence by virtue of their ownership of it, their financial participation therein or the rules which govern it. A dominant influence shall be presumed when a state or other territorial authorities, directly or indirectly in relation to an undertaking: (i) hold the major part of the undertaking's subscribed capital, (ii) control the majority of the votes attached to the shares issued by the undertaking, or (iii) can appoint more than half of the members of the undertaking's administrative, managerial or supervisory body.

» 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. Specifically, the cover pool can contain 50% non-OECD assets, if a rating agency registered with ESMA grants a rating of the first credit quality step to these assets, and 10%, if the rating is of the second credit quality step. Non-OECD exposure may be on a public sector entity (collectivité de droit public) of such non-OECD member state in the cover pool for public sector bonds.

» The legislation does not prescribe any specific stress test in respect of interest rate or currency risk.

» The covered bond law does not exclude set-off in relation to cover pool assets and we understand that 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.

NORDLB/CBB voluntarily manages the programme tighter than required by the Luxembourg covered bond legislation. 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 Bonds 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 will be made in a timely fashion following a CB anchor event, which we measure using the Timely Payment Indicator, explained further below.

Primary Analysis

ISSUER ANALYSIS

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. NORD/LB is a German federal state bank. It functions as a state bank in the two federal states of Lower Saxony and Saxony-Anhalt, and as a central bank for the savings banks in these states. The largest shareholder is the State of Lower Saxony with a 59% stake. For a description of the parent's rating drivers, please see our Credit Opinion, published in September 2016 (see Moody's related research).

Credit quality of the issuer: The issuer's CR assessment is A3(cr), reflecting its high integration into the NORD/LB group. NORD/LB CBB is tasked with the origination and funding of public sector assets that do not qualify for NORD/LBs German public sector Pfandbrief programme.

The rating we base our analysis on is what we call the "CB anchor," which for covered programmes under an EU covered bond law is the CR assessment plus one notch.

Dependency on the issuer's credit quality: The credit quality of the covered bonds is primarily dependent on the credit quality of the covered bonds issuer. Should the issuer's credit strength 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 decrease.

In case of deterioration of the CB anchor, the issuer would have the ability, but not obligation, to increase the OC in the cover pool. Failure to increase the level of OC under these circumstances could lead to negative rating actions.

Reasons for the high level of linkage 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, issue further bonds and enter new hedging arrangements. Such actions could negatively affect the value of the cover pool.

REFINANCING RISK

They weighted average life of the assets and liabilities is with each about 7 years relatively close. However, the asset maturity profile is not matching the maturity profile of the hard bullet bonds, leaving the risk that liquidity gaps materialize following a CB anchor event.

Following a CB anchor event, the "natural" amortisation of the cover pool assets alone cannot be relied on to repay 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 certain 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 Approach to Rating Covered Bonds, December 2016).

The refinancing-positive factors are balanced with the negative ones. 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. The administrator has the ability to issue covered bonds.

- The good credit quality of the cover pool, which is reflected in the collateral score (9.7%). 74.6% of the assets are reported as eligible for repurchase programme operations with a central bank. 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. The good credit quality of the assets improves the likelihood to find suitors that are willing to take over the cover pool even though the assets do not qualify for cover pools of German Pfandbrief programmes.

» The issuer voluntarily adheres to a 180 day liquidity cover following the concept of the German Pfandbrief 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.

Refinancing-negative aspects of this covered bond programme include:

» The programme does not benefit from any contractual provisions to allow for an extension of a principal refinancing period. All covered bonds issued under this programme will have a hard bullet repayment with no extension period.

» 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.

» 73.6% of the assets are with fixed interest rate arrangements. During the entire life of the loan, an administrator of the cover pool may not be able to change the rate charged to the underlying debtors. The weighted average life of the fixed rate assets is 7.1 years.

INTEREST-RATE AND CURRENCY RISK

The programme exhibits interest-rate and currency risks, which could materialize from the different payment promises and durations made on the cover pool and the covered bonds.

Exhibit 3

Overview Assets and Liabilities

	WAL Assets (Years)	WAL Liabilities (Years)	Assets (%)	Liabilities (%)
Fixed rate	7.1	7.6	73.6%	93.2%
Variable rate	6.6	0.7	26.4%	6.8%

WAL = weighted-average life
Source: NORD/LB CBB

The issuer has entered swaps into the cover pool register of its public-sector covered bonds. The swaps are provided by its parent bank based on the German law master agreement (DRV Rahmenvertrag) and with tailored annexes. We see a significant risk that these swaps will be difficult to transfer to a third party as swap counterparty and hence expect that the covered bond programme will be exposed to significant market risks following an issuer CB anchor event.

In the case of issuer insolvency, we currently do not assume that the cover pool administrator will 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 and currency stressed rates used over different time horizons are published in our Rating Methodology (see Moody's Approach to Rating Covered Bonds).

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

» The cover pool assets are denominated in six different currencies (euro 54.2%, U.S. dollar 30.3%, Canadian dollar, Japanese yen, Swiss franc, British pound) while the bonds are denominated in four currencies (euro 78.6%, U.S. dollar 13.9%, Swiss franc, Norwegian krona). Albeit there is some natural hedging as the same currency pair is on the asset and liability side, the resulting market risks are significant given the duration mismatches.

» As of 31 March 2016, 73.6% of assets pay a fixed-rate. A potential sale of fixed-rate assets (in order to meet due payments 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.

» The exposure to currency risk will remain in the medium term: While the amount of U.S. liabilities may reduce from currently $575 million to $200 million upon maturity of a U.S. denominated bond in June 2017, the weighted average life of the U.S. denominated assets is 13.3 years. We understand that the issuer's new loan origination focus is mainly on EEA countries.

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

» The issuer hedges the largest part of the interest and currency risk. It is the issuer's current practice to hedge at least 90% of the currency risks via swaps. The hedging is provided via internal swap arrangements with the parent entity, NORD/LB (deposits A3; adjusted baseline credit assessment ba1; CR assessment A3(cr)).

» The exposure to market risk is reduced as the issuer voluntarily adheres to the significant market risk stress tests prescribed in the German Pfandbrief law in case that the interest or currency risk is not hedged via the internal swap arrangements. The issuer follows the static stress test approach, which includes a parallel shift of the interest curve by +/- 250bps, a 10% stress for the currencies of EEA states and Switzerland, a 20% stress for the U.S.A., Canada and Japan and at least 25% for other currencies.

TIMELY PAYMENT INDICATOR

Our Timely Payment Indicator (TPI) assesses the likelihood that timely payments will 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 amount of OC. We have assigned a TPI of Probable to these covered bonds.

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 good quality of the cover pool including the over-collateralisation, the high share of assets eligible for central bank repurchase operations and the ability of the covered bond administrator to issue covered bonds improves the likelihood of timely payments.

» The issuer voluntarily adheres 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.

» 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:

» All covered bonds outstanding have a bullet repayment at maturity, without any extension period for the repayment of the bonds.

» 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 significant currency and interest rate risks that are currently largely hedged via internal swap arrangement 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.

» The covered bond programme does not benefit from any designated source of liquidity if cash flow collections are interrupted.

Based on the current TPI of Probable, the TPI Leeway for this programme is 2 notches. Therefore, a downgrade of the CB anchor by three notches could lead to a downgrade of the covered bonds, all other variables being equal.

Additional Analysis

LEGAL RISKS FOR NON-EEA ASSETS

In the event of the issuer's insolvency, we believe that cover pool assets located outside the European Economic Area (EEA) are less protected against claims of the issuer's other creditors than assets located in the EEA. In particular, we have identified and analysed the following scenario:

Cover pool assets outside the EEA may not be available to covered bondholders on a priority basis because other (unsecured) creditors of the issuer may successfully access the assets in the cover pool if the borrower is located outside the EEA. This may, due to secondary insolvency proceedings being commenced under the respective domestic law, result in a lower recovery. A significant portion of the loans (32%) in NORD/LB CBB's cover pool are located outside the EEA. According to NORD/LB CBB, no trust solutions exist for these assets, and so this legal risk is not mitigated for those assets. We apply a haircut to the value of non-EEA assets to address the risk of a lower recovery, taking into account that the number of other (unsecured) creditors of the issuer is limited (see "Structural Protection Mechanisms for Non-EEA Assets in German Cover Pools" published in July 2014).

LIQUIDITY

The covered bond programme does not benefit from any designated source of liquidity if cash flow collections are 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 has voluntarily elected to cover potential liquidity gaps for the next 180 days, in line with the German Pfandbrief Act. 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 are subject to time subordination. Principal cash collections may be used on a first-come, first-served basis, paying earlier maturing covered bonds prior to later maturing covered bonds. This could lead to over-collateralisation being eroded before any payments are made to later paying covered bonds.

Comparables

Exhibit 4

PROGRAMME NAME	NORD/LB Luxembourg S.A. Covered Bond Bank Covered Bond Programme	BELFIUS BANK SA/NV - Public Sector Covered Bonds Programme	Depfa ACS Bank - Asset Covered Securities - Covered Bond Programme	UniCredit Bank AG - Public Sector - Covered Bond Programme	Barclays Bank PLC Local Authority - Covered Bond Programme
Overview					
Programme is under the law	Luxembourg Law	Belgian Covered Bond Law	Irish Asset Covered Securities Act	Pfandbrief Act	UK Covered Bond Law
Main country in which collateral is based	Germany	Belgium	USA	Germany	UK
Country in which issuer is based	Luxembourg	Belgium	Ireland	Germany	UK
Total outstanding liabilities	3,239,067,653	1,800,000,000	14,283,511,514	4,008,187,838	2,967,000,000
Total assets in the Cover Pool	4,046,295,658	2,541,632,005	15,368,733,420	6,504,251,213	3,388,107,849
Issuer name	NORD/LB Luxembourg S.A. Covered Bond Bank	Belfius Bank SA/NV	Depfa ACS Bank	UniCredit Bank AG	Barclays Bank Plc
Issuer CR assessment	A3(cr)	A2(cr)	Baa2(cr)	A1(cr)	A1(cr)
Group or parent name	Norddeutsche Landesbank GZ	n/a	DePfa Bank PLC	n/a	Barclays Plc
Group or parent CR assessment	A3(cr)	n/a	Baa2(cr)	n/a	Unpublished
Main collateral type	Public Sector	Public Sector	Public Sector	Public Sector	Public Sector
Collateral types	Public Sector 97.4%, Residential 0%, Commercial 0%, Supplementary assets 2.6%	Public Sector 100%, Residential 0%, Commercial 0%, Supplementary assets 0%	Public Sector 100%, Residential 0%, Commercial 0%, Supplementary assets 0%	Public Sector 100%, Residential 0%, Commercial 0%, Supplementary assets 0%	Public Sector 100%, Residential 0%, Commercial 0%, Supplementary assets 0%
Ratings					
Covered bonds rating	Aa1	Aaa	Aa2	Aaa	Aaa
Entity used in Moody's EL & TPI analysis	NORD/LB Luxembourg S.A. Covered Bond Bank	Belfius Bank SA/NV	Depfa ACS Bank	UniCredit Bank AG	Barclays Bank PLC
CB anchor	CR Assessment + 1 notch	CR Assessment + 1 notch	CR Assessment + 1 notch	CR Assessment + 1 notch	CR Assessment + 0 notches
CR Assessment	A3(cr)	A2(cr)	Baa2(cr)	A1(cr)	A1(cr)
SUR	n/a	A3	n/a	Baa1	A2
Unsecured claim used for Moody's EL analysis	Yes	Yes	Yes	Yes	Yes
Value of Cover Pool					
Collateral Score	9.7%	13.9%	7.6%	5.1%	5.8%
Collateral Risk (Collateral Score post-haircut)	12.1%	7.6%	3.8%	2.8%	3.2%
Market Risk	18.3%	18.2%	12.4%	7.2%	6.0%
Over-Collateralisation Levels					
Committed OC	2.0%	5.0%	5.0%	2.0%	13.6%
OC as per reporting date	24.9%	41.2%	7.6%	62.5%	14.2%
OC consistent with current rating	16.0%	26.0%	6.0%	2.0%	5.5%
Surplus OC	8.9%	15.2%	1.6%	60.5%	8.7%
Timely Payment Indicator & TPI Leeway					
TPI	Probable	Probable-High	Probable-High	High	Probable
TPI Leeway	2	2	1	4	2
Reporting date	31/03/2016	30/06/2016	30/09/2016	30/06/2016	25/08/2016

Source: Moody's Investors Service

Cover Pool Overview

The cover pool of assets consists of claims against public-sector entities located in 18 countries.

Following a CB anchor event, we determine the value of the cover pool, and therefore any losses, assuming a stressed environment.

Cover Pool Description

Pool Description as of 31 March 2016

The cover pool consists of public-sector loans (97.4%) and substitute assets (2.6%). The majority of the cover assets are loans backed by public sector entities located in Germany and the U.S.A. (66.4%).

Public-sector Loans

Public-sector loans account for 97.4% of the total cover pool. The majority of the borrowers backing the public sector loans are located in Germany (42.3%), with regional concentrations in North Rhine-Westphalia (31.4%).

The public sector cover pool features 73.6% fixed-rate assets. 54.2% are denominated in euro while 30.3% are denominated in U.S. dollar. The exposure to the 10 largest borrowers is 25.0% of the pool. All of the assets are performing as of the cut-off date of this report.

Exhibits 5 to 11 below show more details about the cover pool characteristics.

Exhibit 5

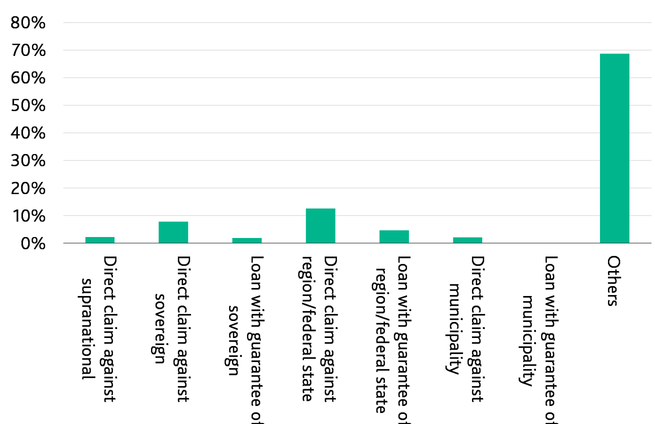
Cover Pool Information

Overview		Specific Loan and Borrower characteristics	
Asset type:	Public Sector	Repo eligible loans / bonds with the ECB:	37.2%
Asset balance:	EUR 4,046,295,658	Repo eligible loans / bonds with ECB or other central banks:	74.6%
WA remaining Term (in months):	93	Percentage of fixed rate loans / bonds:	73.6%
Number of borrowers:	160	Percentage of bullet loans/ bonds:	63.1%
Number of loans / bonds:	300	Loans / bonds in non-domestic currency:	45.8%
Exposure to the 10 largest borrowers:	25.0%	**Performance**	
Average exposure to borrowers:	EUR 25,289,348	Loans / bonds in arrears (≥ 2months - < 6months):	0.0%
		Loans / bonds in arrears (≥ 6months - < 12months):	0.0%
		Loans / bonds in arrears (≥ 12months):	0.0%
		Loans / bonds in a foreclosure procedure:	0.0%

Source: NORD/LB CBB

Exhibit 6

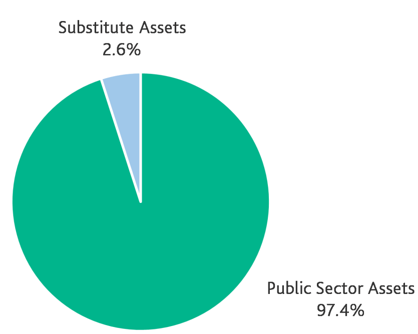
Borrower type



Source: NORD/LB CBB

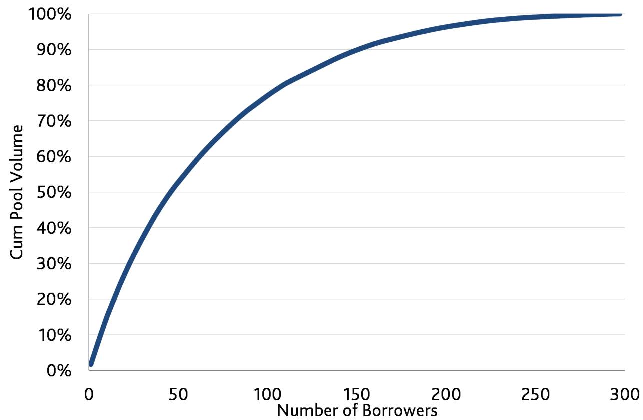
Exhibit 7

Percentage of public sector assets



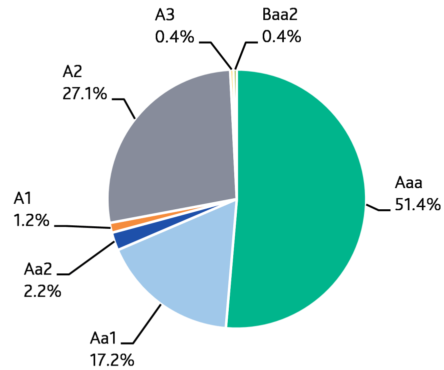
Source: NORD/LB CBB

Exhibit 8
Borrower Concentration



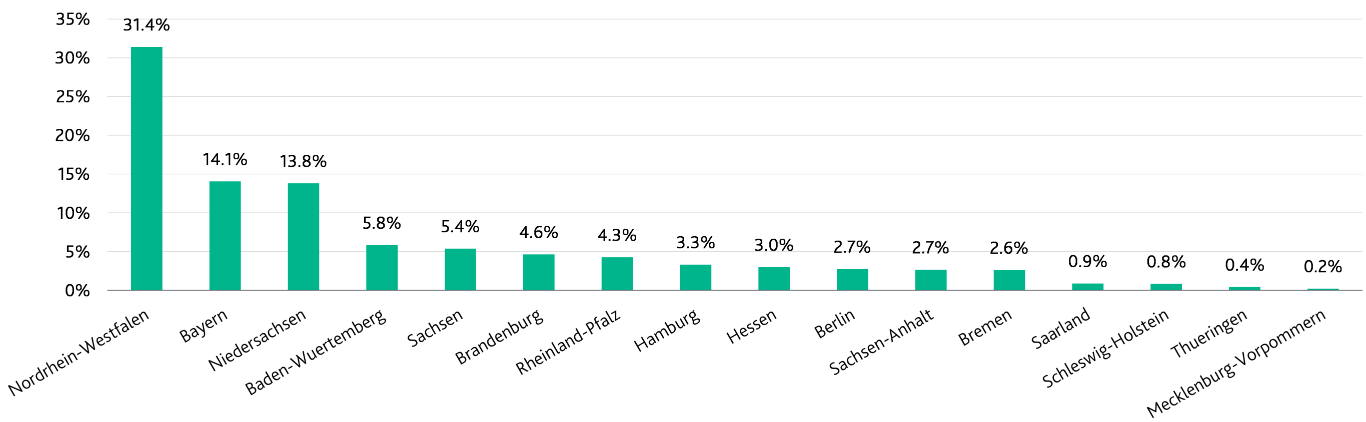
Source: NORD/LB CBB

Exhibit 9
Pool distribution by country exposure rating



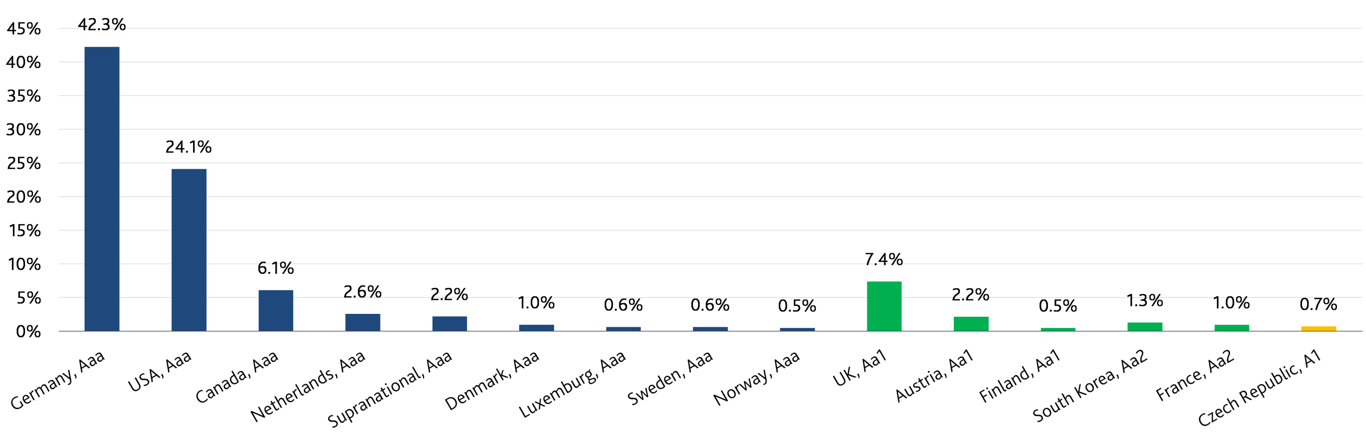
Source: NORD/LB CBB

Exhibit 10
Regional distribution for assets located in Germany



Source: NORD/LB CBB

Exhibit 11
Distribution by country exposure, rating



Source: NORD/LB CBB

Substitution

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. NORDLB/CBB's programme carries a higher substitution risk than other covered bond programmes, notably from Germany and Austria, as the Luxembourgish covered bond legislation has a wider definition of public sector assets that are eligibile for inclusion into the cover pool (see Legal Framework Description).

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.

For this programme, the collateral score of the pool is 9.7%. This collateral score is lower than the average collateral score of covered bond programmes backed by public sector assets from lower rated sovereigns, but higher than the average collateral score of Pfandbrief covered bond programmes backed with German public sector assets. For further details, please see Moody's Global Covered Bonds Monitoring Overview: Q2 2016.

Luxembourg's covered bond law includes in the definition of public sector assets public undertakings over which a territorial authority may directly or indirectly exercise a dominant influence. Our collateral score reflects the pool's characteristic that the public sector assets include public undertakings in highly rated sovereigns without a direct claim or guarantee from the sovereign or other territorial authority (see pool distribution by country exposure rating in Exhibit 9 and borrower type classification in Exhibit 6).

Asset Specifications

31.3% of the public sector assets are direct claims against or loans with a guarantee of a sovereign, a federal state or region, or a municipality. Direct claims against federal states of Germany are with 10.5% of the public sector assets the largest part of these assets.

The remaining, as borrower type “other” classified public sector assets comprise 68.7% of the pool. This portion of the cover pool consists primarily of three main asset types: Loans to German kommunalnahe Unternehmen, U.S. municipal bonds and European public-private-partnership (PPP) financings. The issuer's business strategy concentrates on Europe and hence we expect a growing share of cover pool assets pertaining to German kommunalnahe Unternehmen and European PPPs.

GERMAN KOMMUNALNAHE UNTERNEHMEN (26% OF POOL)

Financing of public undertakings. The borrowing entity is owned by a state or other territorial authority and provides basic public services like energy supply, water supply and transportation services. The entities often have monopoly-like positions in local markets, however they do not benefit from a guarantee from a governmental entity and do not have tax or levy raising power. There are regional concentrations in Nordrhein-Westfalen (Aa1), Bavaria (Aaa) and Baden-Wuerttemberg (Aaa).

U.S. MUNICIPALS (23% OF POOL)

Three main types of bonds are found in the pool:

» Revenue Bonds: Municipal bonds supported by the revenue from a specific project, such as a toll bridge, highway or local stadium.

» Tax Allocation Bonds: Bonds issued in conjunction with a redevelopment project; the repayment is derived from the increase in tax collections on the added value of the redevelopment.

» General Obligation Bonds: Municipal bonds backed by the credit and taxing power of the issuing jurisdiction rather than the revenue from a given project; it is assumed that a municipality will be able to repay its debt obligation through taxation or revenue.

EUROPEAN PUBLIC-PRIVATE-PARTNERSHIPS (10% OF POOL)

The PPPs are set up to deliver public service functions where the public authority has a general interest to deliver services, using private funds. Examples include the education, transportation and health care sector. All of the transactions derive their cash-flow through regular contractual payments from a public body. However, there is no direct claim against a public body for debt repayment. The PPP assets are somewhat diversified across the operational cycle - in construction (4.2% of the pool) and in operation (6.3%) - and across geographical regions, albeit there is a concentration on the United Kingdom (7.4% of the pool) and the Netherlands (1.3%).

Cover Pool Assessment

We calculate the collateral score for public sector assets using a multi-factor time-to-default model solved through a monte-carlo simulation (called PUSCOS). Our analysis takes into account, inter alia, the impact of concentration on borrower, regional and country levels as well as individual borrowers' credit quality.

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

  – The obligors are generally of high credit quality.

  – The cover pool benefits from extensive international diversification (15+ countries) and some regional diversification within the individual countries.

  – All public sector loans are performing and not in arrears as of the cut-off date of this report.

  – The issuer has publicly stated to maintain at least a OC level of 22.0% on a nominal and net present value basis. We do not consider this public statement as “committed” OC under our methodology.

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

  – 68.7% of the cover pool assets are neither direct claims against or guaranteed by a sovereign or other territorial authority but finance other types of public sector undertakings.

  – The 10 largest obligors account for 25.0% of the cover pool.

  – 63.1% of the cover pool assets are non-amortising bullet loans.

  – The Luxembourg covered bond legislation grants issuers significant leeway as the cover pool eligibility criteria for public sector assets have no limits on assets located outside the EEA.

Methodology and Monitoring

The primary methodology we use in rating the issuer’s covered bonds is “Moody’s Approach to Rating Covered Bonds”, published in December 2016. 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 could negatively affect the ratings or, in some cases, our ability to continue to rate the covered bonds.

Moody's Related Research

Rating Methodology

» Moody's Approach to Rating Covered Bonds, December 2016 (1044142)

Special Comments

» Moody's Global Covered Bonds Monitoring Overview: Q2 2016, August 2016 (PBS_1039127)

» European Covered Bond Legal Frameworks: Moody's Legal Checklist, December 2005 (SF66418)

» Proposal for Pan-European Covered Bond Framework has a Number of Strengths Compared to Existing Frameworks, November 2015 (SF419947)

» Germany – Legal Framework for Covered Bonds, August 2015 (SF327227)

» Structural Protection Mechanisms for Non-EEA Assets in German Cover Pools, July 2014 (SF374519)

Performance Overview

» BELFIUS BANK SA/NV - Public Sector Covered Bonds, July 2016 (SF436763)

» Depfa ACS Bank - Asset Covered Securities, December 2016 (SF444416)

» UniCredit Bank AG - Public-Sector Covered Bonds, September 2016 (SF440234)

» Barclays Bank PLC Local Authority Covered Bonds, October 2016 (SF442312)

Credit Opinion

» Norddeutsche Landesbank GZ

Webpage

» www.moodys.com/coveredbonds

To access any of these reports, 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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