

**Rating Action: Moody's changes direction of covered bond ratings' review for
NORD/LB and Deutsche Hypo to review up from direction uncertain**

18 Feb 2019

Frankfurt am Main, February 18, 2019 -- Moody's Investors Service ("Moody's") has taken the following rating action on Covered Bonds issued by Norddeutsche Landesbank GZ ("NORD/LB"; deposits Baa2 on review for upgrade; adjusted baseline credit assessment ba3 on review for upgrade; counterparty risk assessment Baa2(cr) on review for upgrade) and Covered Bonds issued by Deutsche Hypothekenbank (Actien-Gesellschaft) ("Deutsche Hypo", deposits Baa2 on review for upgrade; adjusted baseline credit assessment ba3 on review for upgrade; counterparty risk assessment Baa2(cr) on review for upgrade):

- Norddeutsche Landesbank GZ - Mortgage Covered Bonds: Aa1 placed on review for upgrade from Aa1 on review direction uncertain,
- Norddeutsche Landesbank GZ - Public-Sector Covered Bonds: Aa1 placed on review for upgrade from Aa1 on review direction uncertain,
- Norddeutsche Landesbank GZ - Aircraft Mortgage Covered Bonds: A3 placed on review for upgrade from A3 on review direction uncertain,
- Deutsche Hypothekenbank (Actien-Gesellschaft) - Mortgage Covered Bonds: Aa1 placed on review for upgrade from Aa1 on review direction uncertain, and
- Deutsche Hypothekenbank (Actien-Gesellschaft) - Public-Sector Covered Bonds: Aa2 placed on review for upgrade from Aa2 on review direction uncertain.

RATINGS RATIONALE

Today's rating action is prompted by the review of the ratings assigned to NORD/LB and Deutsche Hypo. For further details, please see "Moody's changes direction of long-term ratings' review for NORD/LB to a review for upgrade, confirms short-term ratings", published on February 14, 2019 at http://www.moodys.com/viewresearchdoc.aspx?docid=PR_394987.

The Covered Bonds have been placed on review for upgrade because NORD/LB's and Deutsche Hypo's counterparty risk ("CR") assessment has been placed on review for upgrade. We expect to conclude the rating review of these two entities' CR assessments if finalised. During the review, Moody's will consider the level of over-collateralisation ("OC"), including OC in "committed" form, that is expected for each programme.

KEY RATING ASSUMPTIONS/FACTORS

Moody's determines Covered Bond ratings using a two-step process: an expected loss analysis and a timely payment indicator ("TPI") framework analysis.

EXPECTED LOSS:

Moody's uses its Covered Bond Model ("COBOL") to determine a rating based on the expected loss of the bond. COBOL determines expected loss as (1) a function of the probability that the issuer will cease making payments under the Covered Bonds (a CB anchor event); and (2) the stressed losses of the cover pool assets following a CB anchor event.

The CB anchor for all programmes is CR assessment plus one notch. The CR assessment reflects an issuer's ability to avoid defaulting on certain senior bank operating obligations and contractual commitments, including Covered Bonds. Moody's may use a CB anchor of CR assessment plus one notch in the European Union or otherwise where an operational resolution regime is particularly likely to ensure continuity of Covered Bond payments.

---Norddeutsche Landesbank GZ -- Mortgage Covered Bonds---

The cover pool losses for this programme are 22.5%. This is an estimate of the losses Moody's currently models following a CB anchor event. Moody's splits cover pool losses between market risk of 13.3% and collateral risk of 9.2%. Market risk measures losses stemming from refinancing risk and risks related to interest-rate and currency mismatches (these losses may also include certain legal risks). Collateral risk measures losses resulting directly from cover pool assets' credit quality. Moody's derives collateral risk from the collateral score, which for this programme is currently 13.8%.

The over-collateralisation in the cover pool is 45.7%, of which the issuer provides 2.0% on a "committed" basis. Under Moody's COBOL Model, the minimum OC consistent with the Aa1 rating is 19.5%, of which 0% needs to be in "committed" form to be given full value. These numbers show that Moody's is relying on "uncommitted" OC in its expected loss analysis.

With a CR assessment of Baa1(cr) (one notch higher than currently), OC consistent with a Aaa covered bonds rating would be 20.0%, of which 0% would need to be provided in "committed" form to be given full value.

All numbers in this section are based on the Performance Overview report based on data as per 30 September 2018.

---Norddeutsche Landesbank GZ -- Public-Sector Covered Bonds---

The cover pool losses for this programme are 9.0%. This is an estimate of the losses Moody's currently models following a CB anchor event. Moody's splits cover pool losses between market risk of 6.5% and collateral risk of 2.4%. Market risk measures losses stemming from refinancing risk and risks related to interest-rate and currency mismatches (these losses may also include certain legal risks). Collateral risk measures losses resulting directly from cover pool assets' credit quality. Moody's derives collateral risk from the collateral score, which for this programme is currently 4.8%.

The over-collateralisation in the cover pool is 11.3%, of which the issuer provides 2.0% on a "committed" basis. Under Moody's Cobol model, the minimum OC consistent with the Aa1 rating is 4.5%, of which 0% needs to be in "committed" form to be given full value. These numbers show that Moody's is relying on "uncommitted" OC in its expected loss analysis.

With a CR assessment of Baa1(cr) (one notch higher than currently), OC consistent with a Aaa covered bonds rating would be 7.5%, of which 0% would need to be provided in "committed" form to be given full value.

All numbers in this section are based on the Performance Overview report based on data as per 30 September 2018.

---Norddeutsche Landesbank GZ - Aircraft Mortgage Covered Bonds---

The cover pool losses for this programme are 72.1%. This is an estimate of the losses Moody's currently models following a CB anchor event. Moody's splits cover pool losses between market risk of 5.1% and collateral risk of 67.0%. Market risk measures losses stemming from refinancing risk and risks related to interest-rate and currency mismatches (these losses may also include certain legal risks). Collateral risk measures losses resulting directly from cover pool assets' credit quality. Moody's derives collateral risk from the collateral score, which for this programme is currently 100%.

The over-collateralisation in the cover pool is 169.4%, of which the issuer provides 2.0% on a "committed" basis. Under Moody's COBOL Model, the minimum OC consistent with the A3 rating is 0%, of which 0% needs to be in "committed" form to be given full value. These numbers show that Moody's is not relying on "uncommitted" OC in its expected loss analysis.

With a CR assessment of Baa1(cr) (one notch higher than currently), OC consistent with an A2 covered bonds rating would be 0%, of which 0% would need to be provided in "committed" form to be given full value.

All numbers in this section are based on the Performance Overview report based on data as per 30 September 2018.

---Deutsche Hypothekenbank (Actien-Gesellschaft) - Mortgage Covered Bonds---

The cover pool losses for this programme are 14.1%. This is an estimate of the losses Moody's currently models following a CB anchor event. Moody's splits cover pool losses between market risk of 8.3% and collateral risk of 5.8%. Market risk measures losses stemming from refinancing risk and risks related to

interest-rate and currency mismatches (these losses may also include certain legal risks). Collateral risk measures losses resulting directly from cover pool assets' credit quality. Moody's derives collateral risk from the collateral score, which for this programme is currently 8.7%.

The over-collateralisation in the cover pool is 18.8%, of which the issuer provides 2.0% on a "committed" basis. Under Moody's COBOL Model, the minimum OC consistent with the Aa1 rating is 11.5%, of which 0% needs to be in "committed" form to be given full value. These numbers show that Moody's is relying on "uncommitted" OC in its expected loss analysis.

With a CR assessment of Baa1(cr) (one notch higher than currently), OC consistent with an Aaa covered bonds rating would be 11.0%, of which 0% would need to be provided in "committed" form to be given full value.

All numbers in this section are based on the Performance Overview report based on data as per 30 June 2018.

---Deutsche Hypothekenbank (Actien-Gesellschaft) - Public-Sector Covered Bonds---

The cover pool losses for this programme are 12.4%. This is an estimate of the losses Moody's currently models following a CB anchor event. Moody's splits cover pool losses between market risk of 8.7% and collateral risk of 3.6%. Market risk measures losses stemming from refinancing risk and risks related to interest-rate and currency mismatches (these losses may also include certain legal risks). Collateral risk measures losses resulting directly from cover pool assets' credit quality. Moody's derives collateral risk from the collateral score, which for this programme is currently 7.2%.

The over-collateralisation in the cover pool is 7.9%, of which the issuer provides 2.0% on a "committed" basis. Under Moody's COBOL Model, the minimum OC consistent with the Aa2 rating is 3.0%, of which 0% needs to be in "committed" form to be given full value. These numbers show that Moody's is relying on "uncommitted" OC in its expected loss analysis.

With a CR assessment of Baa1(cr) (one notch higher than currently), OC consistent with an Aa1 covered bonds rating would be 6.0%, of which 0% would need to be provided in "committed" form to be given full value.

All numbers in this section are based on the Performance Overview report based on data as per 30 September 2018.

For further details on cover pool losses, collateral risk, market risk, collateral score and TPI Leeway across Covered Bond programmes rated by Moody's please refer to 'Moody's Global Covered Bonds Monitoring Overview' and 'Global Covered Bonds Sector Update', published quarterly.

TPI FRAMEWORK:

Moody's assigns a TPI, which measures the likelihood of timely payments to covered bondholders following a CB anchor event. The TPI framework limits the Covered Bond rating to a certain number of notches above the CB anchor.

For NORD/LB's aircraft mortgage Covered Bonds, Moody's has assigned a TPI of "Improbable". The mortgage and public-sector Covered Bonds of NORD/LB and Deutsche Hypo have a TPI of "High".

Factors that would lead to an upgrade or downgrade of the ratings:

The CB anchor is the main determinant of a Covered Bond programme's rating robustness. A change in the level of the CB anchor could lead to an upgrade or downgrade of the Covered Bonds. The TPI Leeway measures the number of notches by which Moody's might lower the CB anchor before the rating agency downgrades the Covered Bonds because of TPI framework constraints.

Based on the current TPI of "Improbable", the TPI Leeway for NORD/LB's aircraft mortgage Covered Bonds is 2 - 3 notches. This implies that Moody's might downgrade the Covered Bonds because of a TPI cap if it lowers the CB anchor by three notches, all other variables being equal.

Based on the current TPI of "High", the TPI Leeway for NORD/LB's mortgage and public-sector Covered Bonds is one notch. This implies that Moody's might downgrade the Covered Bonds because of a TPI cap if it lowers the CB anchor by two notches, all other variables being equal.

Based on the current TPI of "High", the TPI Leeway for Deutsche Hypo's mortgage Covered Bonds is one

notch. This implies that Moody's might downgrade the Covered Bonds because of a TPI cap if it lowers the CB anchor by two notches, all other variables being equal.

Based on the current TPI of "High", the TPI Leeway for Deutsche Hypo's public-sector Covered Bonds is two notches. This implies that Moody's might downgrade the Covered Bonds because of a TPI cap if it lowers the CB anchor by three notches, all other variables being equal.

A multiple-notch downgrade of the Covered Bonds might occur in certain circumstances, such as (1) a country ceiling or sovereign downgrade capping a Covered Bond rating or negatively affecting the CB Anchor and the TPI; (2) a multiple-notch downgrade of the CB Anchor; or (3) a material reduction of the value of the cover pool.

RATING METHODOLOGY

The principal methodology used in these ratings was 'Moody's Approach to Rating Covered Bonds' published in February 2019. Please see the Rating Methodologies page on www.moody.com for a copy of this methodology.

REGULATORY DISCLOSURES

For further specification of Moody's key rating assumptions and sensitivity analysis, see the sections Methodology Assumptions and Sensitivity to Assumptions of the disclosure form.

Moody's did not use any stress scenario simulations in its analysis.

For ratings issued on a program, series or category/class of debt, this announcement provides certain regulatory disclosures in relation to each rating of a subsequently issued bond or note of the same series or category/class of debt or pursuant to a program for which the ratings are derived exclusively from existing ratings in accordance with Moody's rating practices. For ratings issued on a support provider, this announcement provides certain regulatory disclosures in relation to the credit rating action on the support provider and in relation to each particular credit rating action for securities that derive their credit ratings from the support provider's credit rating. For provisional ratings, this announcement provides certain regulatory disclosures in relation to the provisional rating assigned, and in relation to a definitive rating that may be assigned subsequent to the final issuance of the debt, in each case where the transaction structure and terms have not changed prior to the assignment of the definitive rating in a manner that would have affected the rating. For further information please see the ratings tab on the issuer/entity page for the respective issuer on www.moody.com.

For any affected securities or rated entities receiving direct credit support from the primary entity(ies) of this credit rating action, and whose ratings may change as a result of this credit rating action, the associated regulatory disclosures will be those of the guarantor entity. Exceptions to this approach exist for the following disclosures, if applicable to jurisdiction: Ancillary Services, Disclosure to rated entity, Disclosure from rated entity.

Regulatory disclosures contained in this press release apply to the credit rating and, if applicable, the related rating outlook or rating review.

Please see www.moody.com for any updates on changes to the lead rating analyst and to the Moody's legal entity that has issued the rating.

Please see the ratings tab on the issuer/entity page on www.moody.com for additional regulatory disclosures for each credit rating.

Patrick Widmayer
Vice President - Senior Analyst
Structured Finance Group
Moody's Deutschland GmbH
An der Welle 5
Frankfurt am Main 60322
Germany
JOURNALISTS: 44 20 7772 5456
Client Service: 44 20 7772 5454

Juan Pablo Soriano
MD - Structured Finance
Structured Finance Group
JOURNALISTS: 44 20 7772 5456
Client Service: 44 20 7772 5454

Releasing Office:
Moody's Deutschland GmbH
An der Welle 5
Frankfurt am Main 60322
Germany
JOURNALISTS: 44 20 7772 5456
Client Service: 44 20 7772 5454



© 2019 Moody's Corporation, Moody's Investors Service, Inc., Moody's Analytics, Inc. and/or their licensors and affiliates (collectively, "MOODY'S"). All rights reserved.

CREDIT RATINGS ISSUED BY MOODY'S INVESTORS SERVICE, INC. AND ITS RATINGS AFFILIATES ("MIS") ARE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MOODY'S PUBLICATIONS MAY INCLUDE MOODY'S CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES. MOODY'S DEFINES CREDIT RISK AS THE RISK THAT AN ENTITY MAY NOT MEET ITS CONTRACTUAL FINANCIAL OBLIGATIONS AS THEY COME DUE AND ANY ESTIMATED FINANCIAL LOSS IN THE EVENT OF DEFAULT OR IMPAIRMENT. SEE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS AND MOODY'S OPINIONS INCLUDED IN MOODY'S PUBLICATIONS ARE NOT STATEMENTS OF CURRENT OR HISTORICAL FACT. MOODY'S PUBLICATIONS MAY ALSO INCLUDE QUANTITATIVE MODEL-BASED ESTIMATES OF CREDIT RISK AND RELATED OPINIONS OR COMMENTARY PUBLISHED BY MOODY'S ANALYTICS, INC. CREDIT RATINGS AND MOODY'S PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. NEITHER CREDIT RATINGS NOR MOODY'S PUBLICATIONS COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS AND PUBLISHES MOODY'S PUBLICATIONS WITH THE EXPECTATION AND UNDERSTANDING THAT EACH INVESTOR WILL, WITH DUE CARE, MAKE ITS OWN STUDY AND EVALUATION OF EACH SECURITY THAT IS UNDER CONSIDERATION FOR PURCHASE, HOLDING, OR SALE.

MOODY'S CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY RETAIL INVESTORS AND IT WOULD BE RECKLESS AND INAPPROPRIATE FOR RETAIL INVESTORS TO USE MOODY'S CREDIT RATINGS OR MOODY'S PUBLICATIONS WHEN MAKING AN INVESTMENT DECISION. IF IN DOUBT YOU SHOULD CONTACT YOUR FINANCIAL OR OTHER PROFESSIONAL ADVISER.

ALL INFORMATION CONTAINED HEREIN IS PROTECTED BY LAW, INCLUDING BUT NOT LIMITED TO, COPYRIGHT LAW, AND NONE OF SUCH INFORMATION MAY BE COPIED OR OTHERWISE REPRODUCED, REPACKAGED, FURTHER TRANSMITTED, TRANSFERRED, DISSEMINATED, REDISTRIBUTED OR RESOLD, OR STORED FOR SUBSEQUENT USE FOR ANY SUCH PURPOSE, IN WHOLE OR IN PART, IN ANY FORM OR MANNER OR BY ANY MEANS WHATSOEVER, BY ANY PERSON WITHOUT MOODY'S PRIOR WRITTEN CONSENT.

CREDIT RATINGS AND MOODY'S PUBLICATIONS ARE NOT INTENDED FOR USE BY ANY PERSON AS A BENCHMARK AS THAT TERM IS DEFINED FOR REGULATORY PURPOSES AND MUST NOT BE USED IN

ANY WAY THAT COULD RESULT IN THEM BEING CONSIDERED A BENCHMARK.

All information contained herein is obtained by MOODY'S from sources believed by it to be accurate and reliable. Because of the possibility of human or mechanical error as well as other factors, however, all information contained herein is provided "AS IS" without warranty of any kind. MOODY'S adopts all necessary measures so that the information it uses in assigning a credit rating is of sufficient quality and from sources MOODY'S considers to be reliable including, when appropriate, independent third-party sources. However, MOODY'S is not an auditor and cannot in every instance independently verify or validate information received in the rating process or in preparing the Moody's publications.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability to any person or entity for any indirect, special, consequential, or incidental losses or damages whatsoever arising from or in connection with the information contained herein or the use of or inability to use any such information, even if MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers is advised in advance of the possibility of such losses or damages, including but not limited to: (a) any loss of present or prospective profits or (b) any loss or damage arising where the relevant financial instrument is not the subject of a particular credit rating assigned by MOODY'S.

To the extent permitted by law, MOODY'S and its directors, officers, employees, agents, representatives, licensors and suppliers disclaim liability for any direct or compensatory losses or damages caused to any person or entity, including but not limited to by any negligence (but excluding fraud, willful misconduct or any other type of liability that, for the avoidance of doubt, by law cannot be excluded) on the part of, or any contingency within or beyond the control of, MOODY'S or any of its directors, officers, employees, agents, representatives, licensors or suppliers, arising from or in connection with the information contained herein or the use of or inability to use any such information.

NO WARRANTY, EXPRESS OR IMPLIED, AS TO THE ACCURACY, TIMELINESS, COMPLETENESS, MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE OF ANY CREDIT RATING OR OTHER OPINION OR INFORMATION IS GIVEN OR MADE BY MOODY'S IN ANY FORM OR MANNER WHATSOEVER.

Moody's Investors Service, Inc., a wholly-owned credit rating agency subsidiary of Moody's Corporation ("MCO"), hereby discloses that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by Moody's Investors Service, Inc. have, prior to assignment of any rating, agreed to pay to Moody's Investors Service, Inc. for ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$2,700,000. MCO and MIS also maintain policies and procedures to address the independence of MIS's ratings and rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold ratings from MIS and have also publicly reported to the SEC an ownership interest in MCO of more than 5%, is posted annually at www.moody.com under the heading "Investor Relations — Corporate Governance — Director and Shareholder Affiliation Policy."

Additional terms for Australia only: Any publication into Australia of this document is pursuant to the Australian Financial Services License of MOODY'S affiliate, Moody's Investors Service Pty Limited ABN 61 003 399 657AFSL 336969 and/or Moody's Analytics Australia Pty Ltd ABN 94 105 136 972 AFSL 383569 (as applicable). This document is intended to be provided only to "wholesale clients" within the meaning of section 761G of the Corporations Act 2001. By continuing to access this document from within Australia, you represent to MOODY'S that you are, or are accessing the document as a representative of, a "wholesale client" and that neither you nor the entity you represent will directly or indirectly disseminate this document or its contents to "retail clients" within the meaning of section 761G of the Corporations Act 2001. MOODY'S credit rating is an opinion as to the creditworthiness of a debt obligation of the issuer, not on the equity securities of the issuer or any form of security that is available to retail investors.

Additional terms for Japan only: Moody's Japan K.K. ("MJKK") is a wholly-owned credit rating agency subsidiary of Moody's Group Japan G.K., which is wholly-owned by Moody's Overseas Holdings Inc., a wholly-owned subsidiary of MCO. Moody's SF Japan K.K. ("MSFJ") is a wholly-owned credit rating agency subsidiary of MJKK. MSFJ is not a Nationally Recognized Statistical Rating Organization ("NRSRO"). Therefore, credit ratings assigned by MSFJ are Non-NRSRO Credit Ratings. Non-NRSRO Credit Ratings are assigned by an entity that is not a NRSRO and, consequently, the rated obligation will not qualify for certain types of treatment under U.S. laws. MJKK and MSFJ are credit rating agencies registered with the Japan Financial Services

Agency and their registration numbers are FSA Commissioner (Ratings) No. 2 and 3 respectively.

MJJK or MSFJ (as applicable) hereby disclose that most issuers of debt securities (including corporate and municipal bonds, debentures, notes and commercial paper) and preferred stock rated by MJJK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJJK or MSFJ (as applicable) for ratings opinions and services rendered by it fees ranging from JPY125,000 to approximately JPY250,000,000.

MJJK and MSFJ also maintain policies and procedures to address Japanese regulatory requirements.