MOODY'S
INVESTORS SERVICE

Rating Action: Moody's affirms Aaa ratings assigned to Pfandbriefzentrale der schweizerischen Kantonalbanken mortgage covered bonds

19 Jul 2018

Frankfurt am Main, July 19, 2018 -- Moody's Investors Service ("Moody's") has affirmed the Aaa rating assigned to the mortgage covered bonds issued by Pfandbriefzentrale der schweizerischen Kantonalbanken AG (the issuer/Pfandbriefzentrale), as part of its periodic review. The issuer's mortgage covered bonds are governed by the Swiss Pfandbrief Act, which was established in 1931.

RATINGS RATIONALE

A covered bond benefits from (1) the issuer's promise to pay interest and principal on the bonds; and (2) following a CB anchor event, the economic benefit of a collateral pool (the cover pool). The ratings therefore reflect the following factors:

(1) The credit strength of the issuer. Pfandbriefzentrale is a refinancing vehicle (specialised financial institution with a limited scope of business) whose sole purpose is to provide funding to Swiss cantonal banks. Over the past five years, Pfandbriefzentrale has increased the amount of funding to Swiss cantonal banks from CHF29 billion to CHF52 billion. These banks use the funding to refinance their Swiss mortgages businesses. Pfandbriefzentrale and its 24 member banks (which own it) are supervised by the Swiss financial supervisory authority (Eidgenössische Finanzmarktaufsicht or FINMA). Pfandbriefzentrale is one of two Swiss institutions that benefit from the legal privilege to issue Pfandbriefe according to the Swiss Pfandbrief Act. Moody's has assigned a private monitored rating to the issuer.

(2) Following a CB anchor event the value of the cover pool. The stressed level of losses on the cover pool assets following a CB anchor event (cover pool losses) for this transaction is on average 24.6%.

Moody's considered the following factors in its analysis of the cover pool's value:

(a) The credit quality of the assets backing the covered bonds. Pfandbriefzentrale's Swiss Pfandbriefe are collateralised by secured loans to its member banks. On average across the member banks the loans are secured by residential and multi-family mortgage loans. All properties securing the mortgage loans are located in Switzerland. The average collateral score for this cover pool is 7.3% on average.

(b) The legal framework for Swiss Pfandbriefe. The Swiss Pfandbrief legislation has several notable features. One of these is that there are certain property-type-specific loan to value (LTV) limits for mortgages, which secure the loans from the issuer to the member banks. These loans in turn secure the Swiss Pfandbrief. This chain of security (Sicherungskette) under the Swiss Pfandbrief Act therefore includes the issuer, the member banks, and the recourse to the mortgage loans. A further notable feature is that the Swiss Pfandbrief Act prevents any currency mismatch between the outstanding covered bonds and the cover assets. Both covered bonds and cover assets are denominated in Swiss Francs.

(c) The average exposure to market risk, which is 19.7% for this cover pool.

(d) The over-collateralisation at the member-bank level. As of 31 December 2017, the level of over-collateralisation at the member bank level ranged from 16.7% to 57.3%.

The timely payment indicator assigned to this transaction is "very improbable".

KEY RATING ASSUMPTIONS/FACTORS

Moody's determines covered bond ratings using a two-step process: an expected loss analysis and a TPI framework analysis.

EXPECTED LOSS: Moody's uses its Covered Bond Model (COBOL) to determine a rating based on the expected loss on 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 on the

cover pool assets following a CB anchor event.

The CB anchor for this programme is CR assessment plus 0 notches. 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 has assigned a private monitored CR assessment to the issuer.

The average cover pool losses for this programme are 24.6%. 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 19.7% and collateral risk of 4.9%. 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 7.3% on average.

As of 31 December 2017, the level of over-collateralisation at the member bank level ranged from 16.7% to 57.3%, of which 15.0% are provided on a "committed" basis. The minimum over-collateralisation levels, which are held at the member bank level and are consistent with the Aaa rating target vary between 0% to 5.5%. These numbers show that Moody's is relying on "uncommitted" OC in its expected loss analysis.

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", published quarterly. All numbers in this section are based on Moody's most recent modelling based on data, as per 31 December 2017.

TPI FRAMEWORK: Moody's assigns a "timely payment indicator" (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.

Factors that would lead to a 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 a 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. As the issuer rating is private, the TPI Leeway is not published for this transaction.

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 December 2016. Please see the Rating Methodologies page on www.moodys.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.moodys.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.moodys.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.moodys.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

MOODY'S
INVESTORS SERVICE

© 2018 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. 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 SUCH 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 appraisal and rating

services rendered by it fees ranging from $1,500 to approximately $2,500,000. 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.moodys.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. It would be reckless and inappropriate for retail investors to use MOODY'S credit ratings or publications when making an investment decision. If in doubt you should contact your financial or other professional adviser.

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.

MJKK 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 MJKK or MSFJ (as applicable) have, prior to assignment of any rating, agreed to pay to MJKK or MSFJ (as applicable) for appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

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