

WHITEPAPER

NOVEMBER, 2022

Author

Steven Morrison
Sr. Director- Research

Contact Us

Americas
+1.212.553.1658
clientservices@moodys.com

Europe
+44.20.7772.5454
clientservices.emea@moodys.com

Asia (Excluding Japan)
+85.2.2916.1121
clientservices.asia@moodys.com

Japan
+81.3.5408.4100
clientservices.japan@moodys.com

Insurance-associated GHG emissions: The PCAF measurement standard

November 2022 saw the Partnership for Carbon Accounting Financials (PCAF) launch the first global measurement standard for insurance-associated Greenhouse Gas (GHG) emissions. Insurance-Associated Emissions (IAEs) are a type of Scope 3 emissions associated with an insurer or reinsurer's underwriting activities. For many insurers making the commitment to transition to net-zero, IAEs can be a significant source of overall emissions. Yet their measurement and disclosure are far less well developed than other sources such as investments and business operations. PCAF has already developed a widely adopted standard for financed emissions (emissions associated with lending and investments)¹. They have since set up an Insurance-Associated Emissions Working Group to develop equivalent standards for emissions associated with underwriting. The first PCAF Insurance-Associated Emissions Standard² follows a period of public consultation where feedback was sought on various methodology options proposed by the Working Group³.

Many insurance companies have acknowledged the urgent need to account for underwriting activities in the transition to net-zero. A growing number are joining the Net Zero Insurance Alliance (NZIA); a group of insurers who have made the commitment to transition their underwriting portfolios to net-zero GHG emissions by 2050. The NZIA was formed in July 2021 by eight large European insurance groups: AXA, Allianz, Aviva, Generali, Munich Re, SCOR, Swiss Re, and Zurich Insurance Group. It has grown rapidly since, with 29 members (at November 2022) and increasing diversity in company location and size. The NZIA set itself an ambitious objective to publish a target-setting protocol by January 2023, with members committed to individually making intermediate targets public within six months of that date. Version 1.0 of the NZIA's Target-Setting Protocol was published on 31 October 2022 for a period of public consultation. On emissions accounting, this document specifies that "NZIA members shall use a recognized and consistent IAE accounting approach (e.g. PCAF Insurance-Associated Emissions Standard) for setting and tracking progress towards their targets."⁴ The publication of the PCAF IAE Standard thus represents a key milestone in meeting insurers' broader efforts to set emissions targets and transition their underwriting portfolios to net-zero.

¹ The Global GHG Accounting and Reporting Standard for the Financial Industry, PCAF (2020)

² The Global GHG Accounting and Reporting Standard Part C: Insurance Associated Emissions, First Version, PCAF (November 2022)

³ Global GHG Accounting and Reporting Standard for the Insurance Industry, Progress Report for Consultation, PCAF (14 July 2022).

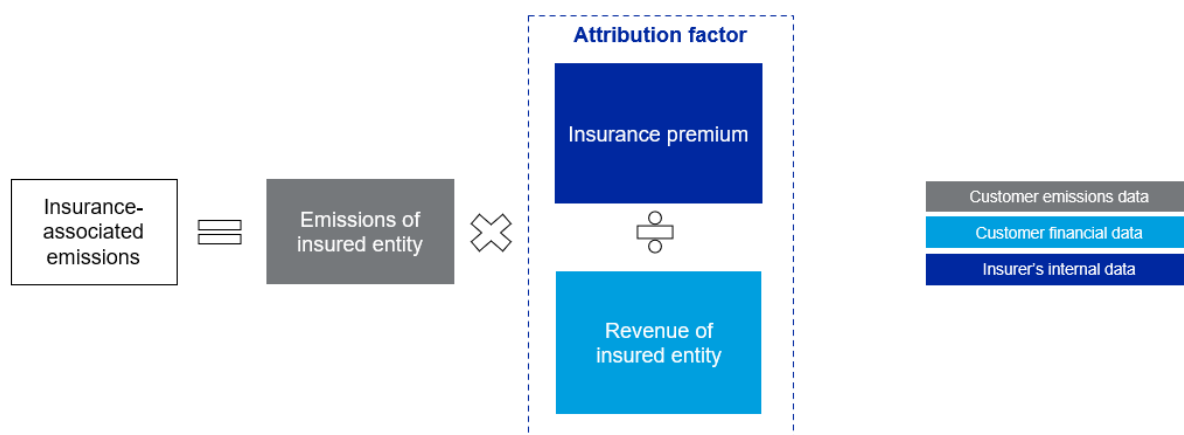
⁴ Net-Zero Insurance Alliance Target-Setting Protocol, Version 1.0 for public consultation, UNEP FI Principles for Sustainable Insurance (2022).

PCAF measurement methodology: Commercial insurance

The initial PCAF IAE Standard covers two lines of business: personal motor lines, and commercial lines. In each case, the insurance-associated emissions for a specific insurance policy are calculated by taking the total emissions of the insured customer or asset, and multiplying by an 'attribution factor'. The attribution factor reflects the proportion of emissions associated with the insurance cover provided.

In particular, for commercial insurance, the IAEs for an individual policy are calculated as shown in Figure 1.

Figure 1



Emissions of the insured entity should cover Scope 1 and 2 emissions at a minimum. Where their Scope 3 emissions data is available and reliable, this should be reported separately.

This choice of attribution factor depends on two sources of data: the insured entity's financial data (revenue) and the insurer's internal data (premiums). This contrasts with an alternative method considered in the progress report for consultation, where the attribution factor depended only on the insurer's internal data. The final choice of attribution factor shown in Figure 1 means that revenue data, in addition to emissions data, will need to be sourced either directly from the insured entity or via third party data providers.

This choice of attribution factor also means that revenue is a source of volatility in IAEs that must be considered when analyzing movements over time. With this choice of attribution factor, movements in IAEs may occur not only due to changes in the underlying entity's emissions, but also in their revenues, and changes in premiums due to insurance market cycles. Given the numerous potential sources of change, insurers will need to interpret IAE dynamics with care.

In addition to commercial lines, similar formulae are defined for personal motor lines. Further lines of business may be added in future iterations of the standard.

Note that IAEs are a distinct category of an insurers' Scope 3 emissions, separate from financed emissions. PCAF highlight that Insurance-Associated Emissions and financed emissions are not directly comparable, should be reported separately, and should not be aggregated.

Challenges and opportunities

One of the major challenges in calculating IAEs will be the collection and management of emissions data. Availability, completeness, reliability, and timeliness of emissions data are recognized challenges with other sources of Scope 3 emissions including investments. However, these challenges are likely to be acute for the emissions associated with the underwriting portfolio. Company emissions data is often challenging to obtain; particularly for the Small, and Medium-sized Enterprises (SMEs), who typically make up a large proportion of commercial insurance portfolios. PCAF has acknowledged this lack of reported data, and in such cases estimates or proxies may be required. There is an expectation that data quality scores are

calculated and reported alongside emissions, with PCAF defining scores on a 1-5 scale depending on the type of data used. This approach recognizes that data quality is not binary, and data limitations should not prevent insurers from getting started on their net-zero underwriting journey. Insurers should use the highest-quality data that is available, but improve data quality over time where possible.

This collection of data - company emissions (both reported and estimated) and revenues, along with the insurers internal data (premiums) - must be aggregated across the entire underwriting portfolio. This requires automated name-matching to ensure that external and internal data sources are correctly aligned. Data quality must also be quantified and aggregated.

Despite these challenges, the resulting collection of data provides insurers with an opportunity to understand their emissions exposures in detail, and to use this information to effectively engage with customers on their transition to net-zero. Insurers may perform detailed attribution and what-if analyses. In particular, they can measure how emissions can be attributed to different sectors and sub-portfolios, how they have changed over time, and how those changes are attributed between changes in underlying emissions and changes in portfolio composition. Insurers may also seek to measure the marginal contribution of new accounts, or more generally how their IAEs might change in future under different assumptions. For example, they may explore the impact of potential reductions in customers' emissions based on the customers' own targets.

While the PCAF standard is focused on GHG emissions, there are a host of other Environmental, Social, and Governance (ESG) considerations that are increasingly being factored into insurance companies' strategies and underwriting workflows⁵. Insurers may also take this opportunity to build a broad analytical capability for their underwriting portfolios, allowing them to measure and manage a range of ESG factors in addition to GHG emissions.

⁵ [Integrating ESG into portfolio management and underwriting workflows: the state of the market](#), Moody's Analytics (2022)

© 2022 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 CREDIT RATINGS AFFILIATES ARE THEIR CURRENT OPINIONS OF THE RELATIVE FUTURE CREDIT RISK OF ENTITIES, CREDIT COMMITMENTS, OR DEBT OR DEBT-LIKE SECURITIES, AND MATERIALS, PRODUCTS, SERVICES AND INFORMATION PUBLISHED BY MOODY'S (COLLECTIVELY, "PUBLICATIONS") MAY INCLUDE SUCH CURRENT OPINIONS. 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 APPLICABLE MOODY'S RATING SYMBOLS AND DEFINITIONS PUBLICATION FOR INFORMATION ON THE TYPES OF CONTRACTUAL FINANCIAL OBLIGATIONS ADDRESSED BY MOODY'S CREDIT RATINGS. CREDIT RATINGS DO NOT ADDRESS ANY OTHER RISK, INCLUDING BUT NOT LIMITED TO: LIQUIDITY RISK, MARKET VALUE RISK, OR PRICE VOLATILITY. CREDIT RATINGS, NON-CREDIT ASSESSMENTS ("ASSESSMENTS"), AND OTHER 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. AND/OR ITS AFFILIATES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT CONSTITUTE OR PROVIDE INVESTMENT OR FINANCIAL ADVICE, AND MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS ARE NOT AND DO NOT PROVIDE RECOMMENDATIONS TO PURCHASE, SELL, OR HOLD PARTICULAR SECURITIES. MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND PUBLICATIONS DO NOT COMMENT ON THE SUITABILITY OF AN INVESTMENT FOR ANY PARTICULAR INVESTOR. MOODY'S ISSUES ITS CREDIT RATINGS, ASSESSMENTS AND OTHER OPINIONS AND PUBLISHES ITS 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, ASSESSMENTS, OTHER OPINIONS, AND 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, ASSESSMENTS, OTHER OPINIONS OR 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.

MOODY'S CREDIT RATINGS, ASSESSMENTS, OTHER OPINIONS AND 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 its 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, ASSESSMENT, 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 credit rating, agreed to pay to Moody's Investors Service, Inc. for credit ratings opinions and services rendered by it fees ranging from \$1,000 to approximately \$5,000,000. MCO and Moody's Investors Service also maintain policies and procedures to address the independence of Moody's Investors Service credit ratings and credit rating processes. Information regarding certain affiliations that may exist between directors of MCO and rated entities, and between entities who hold credit ratings from Moody's Investors Service 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 61 003 399 657 AFSL 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.

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 credit rating, agreed to pay to MJKK or MSFJ (as applicable) for credit ratings opinions and services rendered by it fees ranging from JPY100,000 to approximately JPY550,000,000.

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