



CECL FAQs

Moody's Analytics helps firms with implementation of expected credit loss and impairment analysis for CECL and other evolving accounting standards. We provide advisory services, data, economic forecasts, models, and process automation solutions that make compliance with these standards faster and easier.

Contact Us

Americas
+1.212.553.1653

Europe
+44.20.7772.5454

Asia-Pacific
+852.3551.3077

Japan
+81.3.5408.4100

CECL Modeling FAQs

The Financial Accounting Standards Board's new current expected credit loss impairment standards require timely, forward-looking measurement of lifetime risk using credible models. We answer the leading questions related to modeling challenges.

[Are non-U.S. banks/bank holding companies subject to CECL or CECL-like jurisdictional requirements?](#)

Those that have a parent company in the U.S. but exposure outside the U.S. are subject to CECL.

[Does Basel III/Basel Committee on Banking Supervision address CECL in any manner?](#)

Basel models are different than stress-testing and CECL models, although there are some commonalities with IFRS 9 accounting standards. For instance, with IFRS 9, Basel models can be used as a starting point where or when origination PDs are not available.

[Why is the current generally accepted accounting principles allowance for loan and lease losses distinct from risk estimates, and how does CECL remove this barrier?](#)

Many of the quantitative risk measurement tools/dual risk rating models available today are forward-looking but were often ignored for historical loss history and qualitative adjustments. The guidelines under CECL to incorporate forward-looking information provide an opportunity to develop a single credit risk quantification framework that supports underwriting and portfolio management and provides inputs into the allowance process.

Which modeling methods or techniques are acceptable for CECL?

Loan-level, vintage/cohort-level, or credit transition matrix models are acceptable for CECL. Choice of CECL methodology for each institution will depend on the institution's size and portfolio materiality, data availability, development and processing costs, and availability of existing models. Forecasts and estimates based on industry data provide a low-cost solution for smaller institutions. It should be noted that unlike some other asset classes, consumer credit typically encompasses a lot of data and models (origination scorecards, pricing models, stress-testing, etc.). All of these models could either be utilized or go under revision because of CECL.

What should banks consider when using existing models for CECL?

A variety of approaches are acceptable for CECL, ranging from roll-rate and vintage/cohort models to more sophisticated loan-level and credit-transition models. Lenders that have been through the Federal Reserve's Dodd Frank Act stress test or Comprehensive Capital Analysis and Review stress-testing process may be tempted to reuse their models for the CECL exercise. Recycling or adapting existing models for CECL would be cost effective, but there may be some concern that models developed for stress-testing may be overly conservative for financial accounting purposes.

Should banks with total assets of more than \$50 billion use loan-level CECL models?

Institutions are not required to use loan-level models. CECL allows for loan pooling.

What is your opinion on using stress-test models for CECL?

Stress-testing models are often a good choice for CECL, however users would need to confirm that the model, which was built for stress-testing usually under adverse scenarios, produces accurate baseline forecasts required for CECL. They would also need to extend forecasts to lifetime, which could be a challenge for many institutions.

What are some of the pros and cons of loan-level versus cohort-level or portfolio-level models for consumer lending portfolios?

Portfolio-level models that estimate losses at the asset class level can capture broad sensitivities of performance to economic events and assume consistency of portfolio profile. But they ignore seasoning (or aging) of loans. Loan-level models have the advantage of delivering loan-level forecasts and being able to control for heterogeneity within a portfolio. These types of models provide the most complex and flexible approach. Vintage/cohort models group loans by common characteristics such as vintage, credit score, etc. They can provide a happy medium between portfolio and loan level by identifying key areas of risk within a portfolio while maintaining model stability. They also do a good job of linking macroeconomic scenarios to credit risk parameters.

Do you expect CECL to increase expected credit losses for commercial and industrial loans?

The impact of transitioning to CECL depends on several factors, including:

- » The effect of current and forward-looking conditions at the reporting date (favorable or unfavorable).
- » The portfolio contractual maturity relative to the existing loss emergence period assumption.
- » The quality of portfolio.

In a case where macroeconomic variables are on a quarterly basis and probability of default is on an annual basis, can I find the average macroeconomic variable and regress it against the annual PD?

Yes. This can be done. Macro variables can be averaged if they are rates or summed if they are levels. Preferably, though, quarterly PDs should be used for CECL because of reporting requirements.

Does the probability of default/loss given default approach for C&I portfolios meet CECL's requirement to estimate losses on a collective basis where similar characteristics exist?

The PD/LGD approach meets CECL's requirement as long as the approach has the correct risk drivers included. LGD models typically consider the debt type, seniority of the loan, and segmentation. In this case, it would fulfill the CECL requirements.

What differentiates the drivers of LGD from PD?

LGD depends on multiple factors such as recovery/collection efforts as well as current collateral prices. LGDs can be more volatile and sometimes not intuitively move with the economy due to the first factor. PDs in general move more intuitively with the business cycle.

Is a PD model that does not explicitly include macro forecasts compliant with CECL?

If a PD model can demonstrate that it includes forecasts implicitly, then it could be compliant although how the requirement is met must be clearly documented.

Can banks that have only one risk rating (versus dual risk rating) use PD and LGD?

Not necessarily. To use the PD/LGD method for a given portfolio segment, the bank can have PD and LGD estimates for each of the positions in that segment. However, CECL does not require that the bank have dual risk ratings corresponding to these PD and LGD estimates. That said, we believe that the best approach is to work toward harmonization of risk ratings, reserves, and (where applicable) stress-testing.

Is there a model or metric to map internal ratings to external ratings?

There is no set formula, and it depends in large part on the methodology used internally. For example, if the methodology follows the Moody's Investors Service methodology, then it can be a reasonably simple mapping. However, if the internal ratings include both a point-in-time and a through-the-cycle measure of credit risk, then a customized calibration between the Moody's Investor Service rating scale and the internal scale might be required.

How do the regulators view a proprietary model such as Moody's Analytics?

Based on our experience with IFRS 9 internationally, regulators have viewed the use of proprietary economic models favorably, provided that they are well-grounded in economic theory, well-documented and transparent, and capture the inter-relationships between economic indicators such that a shock to a given factor is propagated throughout

the system. The Moody's Analytics economic forecasting models meet all of these criteria.

How can you ensure the lifetime loss rate is the right number? For example, actual versus predicted values, and back-testing?

With a time series of loan observations, one can calculate at each snapshot: (1) the net charge-offs of each loan observed over its remaining life (net of recoveries); and (2) the lifetime loss rate or loss rate curve predicted. Several statistical techniques can be deployed to evaluate the appropriateness of the estimate for different segments.

Could you comment on reserves for unfunded commitments as they relate to committed and unilaterally cancelable lines of credit under CECL?

CECL uses the term "unconditionally cancelable," not "unilaterally." If the commitment to extend funds is unconditionally cancelable, institutions do not need to estimate expected credit loss on the off-balance sheet part. To look for that "condition," institutions can look at the underwriting documentation that proves the loan is unconditionally cancelable.

If all expected losses are recorded immediately, would that cause a huge surge in reserves at the beginning of the implementation of CECL in the 2019-2020 time frame?

Transition to CECL will require a onetime balance sheet or retained earnings cumulative effect adjustment upon adoption. Building up reserves using CECL methodology before adoption is prohibited. The impact would differ based on the methodologies used and assets assessed. Ideally, institutions should do parallel runs for a year to compare both CECL and incurred loss in preparation for CECL adoption.

How can expected life term be applied to a credit card portfolio?

Expected life term can be defined based on the payment pattern and outstanding balance as of the reporting date, given that credit card "commitment" is considered to be unconditionally cancelable.

How do you define “lifetime” for demand loans and revolving lines of credits?

For all revolving-type of loans that do not have an unconditionally cancelable clause in contracts, new draws are included in balance projections and balances are modeled as such. For bankcards that have this issue we are expecting further guidance from FASB, but there are ways to deal with the issue in either case.

Do net present value considerations need to be taken into account in models that are not discounted cash flow models? For example, in PD/EAD/LGD models?

Although it's important to consider the net present value loss calculation, it is not part of the formal CECL requirement for methodologies other than DCF. Regardless of the modeling framework, multiple calculations can be performed to ensure that the results are reasonable, and no single methodology is at an advantage.

How can a through-the-cycle LGD be converted to a point-in-time LGD?

A TTC LGD can be converted into a PIT LGD by considering current economic conditions directly in the methodology. Alternatively, the TTC LGD estimate could be calibrated to an LGD calculation that is based on current economic conditions.

For small banks lending to companies that do not have public credit ratings, is there a way to imply a credit rating?

Private companies with financial statement data can use Moody's Analytics RiskCalc™ models to derive a point-in-time (up to five years) PD that is already CECL-compliant. Public companies can use the data provided by Moody's Analytics CreditEdge™ public firm PD model. Companies that meet neither of these conditions could feasibly be modeled by using a proxy, for example, an aggregate of similar firms.

CONTACT DETAILS

Visit us at [moodyanalytics.com](https://www.moodyanalytics.com) or contact us at a location below.

AMERICAS

+1.212. 553.1653

clientservices@moody.com

EMEA

+44.20.7772.5454

clientservices.emea@moody.com

ASIA (Excluding Japan)

+852.3551.3077

clientservices.asia@moody.com

JAPAN

+81.3.5408.4100

clientservices.japan@moody.com

© 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.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. 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. ("MJJK") 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 MJJK. 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. MJJK 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 appraisal and rating services rendered by it fees ranging from JPY200,000 to approximately JPY350,000,000.

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