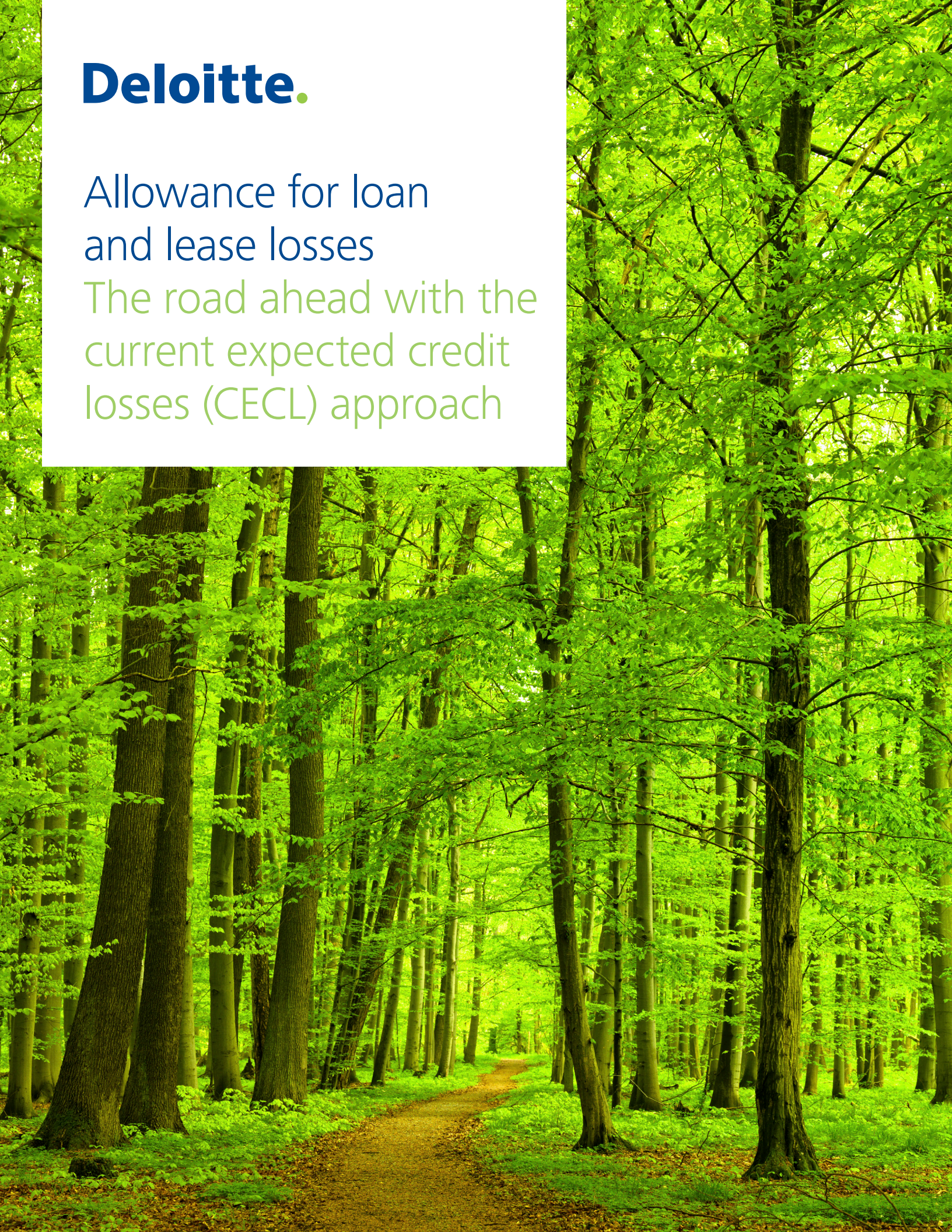




Allowance for loan and lease losses

The road ahead with the
current expected credit
losses (CECL) approach



We are pleased to present the third in a series¹ of publications that highlights Deloitte Advisory's point of view about the significance of the Financial Accounting Standards Board's (FASB) Proposed Accounting Standards Update (ASU), *Financial Instruments—Credit Losses*, and its impact on allowance for loan and lease losses (ALLL). Papers describing our perspective and the potential implications of the current expected credit loss (CECL) model will continue to be published at www.deloitte.com/us/cecl.

Background

In recent years, financial institutions have received additional scrutiny from regulators and external auditors on the ALLL. One of the main reasons for the heightened scrutiny from regulators and auditors around the allowance is the delayed recognition of credit losses ("too little, too late") as witnessed by the downturn.

Industry challenges include a need for more robust ALLL quantitative and qualitative processes that are well-documented and also demonstrate how the financial institution's management has critically challenged the underlying assumptions and consistently applied ALLL policies and procedures. Supporting policies and procedures, data, models, and appropriate risk rating systems are also challenges financial institutions are encountering. Ongoing monitoring of model performance, as well as independent model validations, are integral to managing model risk around the ALLL process.

The financial downturn experienced in 2008 and afterward appeared to expose the weaknesses of the incurred loss approach. In response, the FASB has proposed a new ASU, *Financial Instruments—Credit Losses (Subtopic 825-15)*, commonly referred to as the current expected credit loss (CECL) model. Under CECL, entities are required to account for expected losses over the estimated life of the loan. This is a significant change to the current requirement of recording only incurred losses (probable losses) that can be reasonably estimated. Although outcomes of this calculation will be institution- and portfolio-specific, an increase in ALLL levels is expected under CECL. The distinction between using the "life of the loan" for the loss forecast horizon compared to the existing loss emergence period concept is perhaps the greatest impact of CECL. In addition, financial institutions will be required to incorporate "reasonable and supportable forecasts" that impact the reserve estimate as well as corresponding ALLL processes.

The CECL guidance represents a substantial departure from current ALLL practices. However, many of the modeling approaches that financial institutions currently use for Basel regulatory capital calculations, economic capital calculations, and for stress testing purposes can be leveraged and adapted for CECL. The introduction of the CECL model has broad implications, and adoption of the CECL model will require a well-thought-out tactical plan.

Modeling

The recession challenged many of the existing models and methodologies used by banks to estimate the ALLL. Key industry considerations related to the ALLL process include:

- Increased regulatory oversight of banking risk management practices, including the ALLL process and modeling capabilities.
- Clean, accurate, loan-level data for both modeling and reporting purposes.
 - Data silos that cannot be linked/aggregated
 - Lack of internal loss history to support ALLL model
 - Portfolio combinations or changing/inconsistent definitions
 - Assumed relationships to external data (is the relationship real?)
 - Lack of granular data
 - Stale credit ratings/score data

¹ The first publication, *Staying ahead: Allowance for loan losses* can be found at www.deloitte.com/us/all. The second publication, *Putting current expected credit losses in perspective: Fundamentals of implementation success*, can be found at <http://www2.deloitte.com/us/en/pages/risk/articles/current-expected-credit-losses-cecl-perspective.html>.

- Development of robust, well-documented, data quality processes that provide details for extract, transform, and load (ETL) procedures as well as data quality scorecards or reports.
- Separation of loan-level characteristics to be used in modeling probability of default (PD) and loss given default (LGD) parameters, to align ALLL practices with Basel requirements.
- Challenges to banks to support their loss emergence period (LEP).
- Model variance tolerance policies that often do not exist.
- Overly simplistic or overly complex models.
- Lack of sensitivity analysis and stress testing around the ALLL.
- Models development using spreadsheet-based formulas rather than programming languages.
- Business and modeling assumptions are many times not adequately documented and rationalized.
- Regulatory requirements that banks better discern among different risk profiles and identify appropriate homogenous pools of loans.
- Over-reliance on qualitative adjustments given the inaccuracies of the current quantitative methodology.

Consideration and planning for CECL is crucial as banks enhance their ALLL programs to withstand increased regulatory scrutiny.

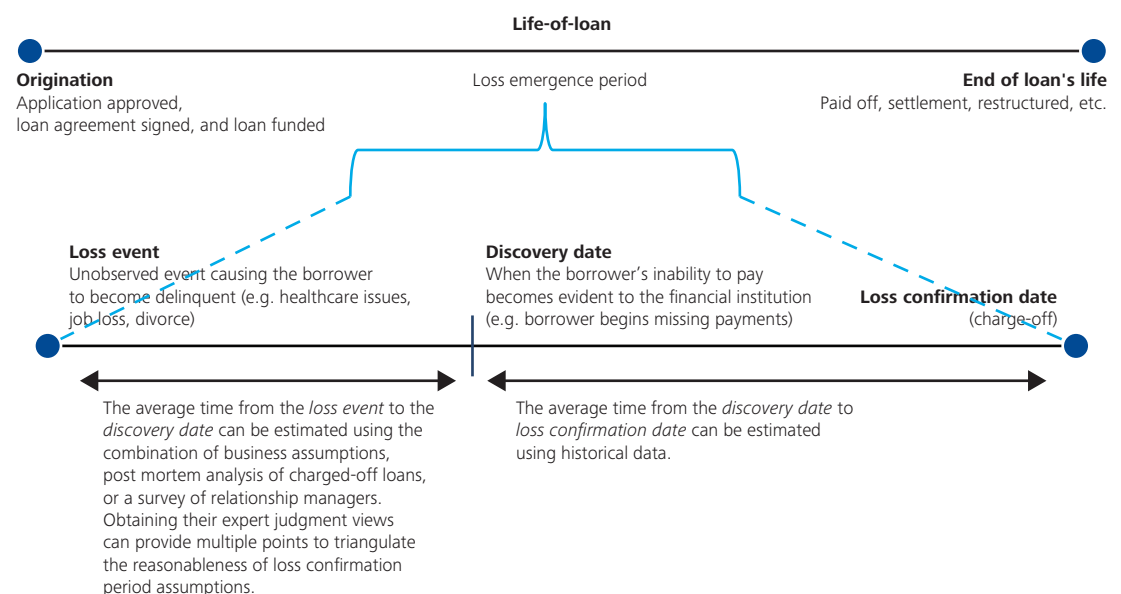
CECL modeling considerations

Transitioning from the current accounting guidance's incurred loss approach to CECL will require a significant amount of thought and discussion with key stakeholders. A brief discussion of key changes that may impact credit modeling—the life-of-loan estimate, and use of reasonable and supportable forecasts—is provided below.

Life-of-loan estimates

One of the most talked about aspects of CECL is the use of a life-of-loan concept. In practice, the life-of-loan concept is widely viewed as replacing the LEP that is currently used, thus creating the potential that estimates need to cover a longer loss horizon. Exhibit 1 depicts a typical situation where a loan's average life is longer than its LEP.

Exhibit 1. LEP vs. Life-of-loan



It is widely expected that many loan portfolio segments will have longer average lives than LEPs. To better understand the differences between these two loss horizon estimates, institutions should consider the following methods as possible starting points in the process:

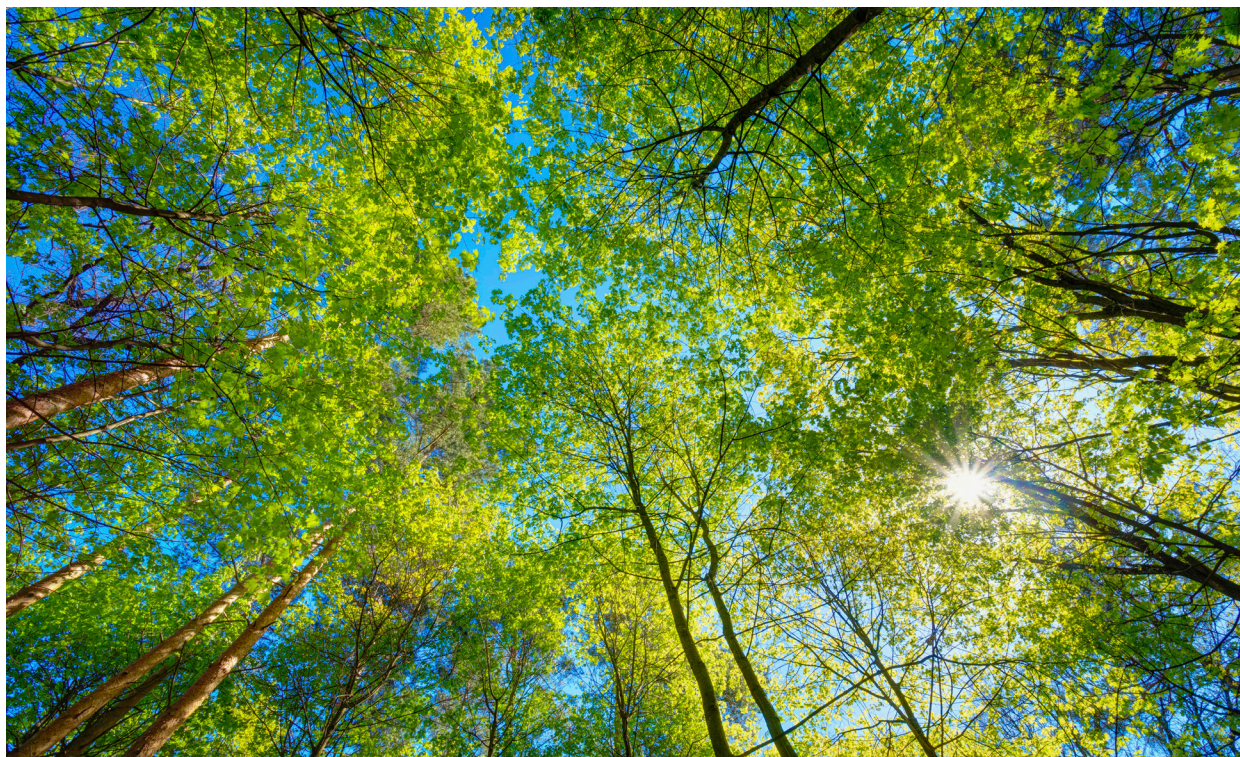
- To determine the life of the loan time horizon, an institution could take the weighted average life of the loan (by portfolio) to estimate the time horizon over which to forecast losses.
- Banks can then begin developing life-of-loan loss estimates and justify adjustments from the historic average losses estimated using LEPs.

Performing comparisons between these estimates with the current loss forecast, using the LEP concept, would provide a general estimate of the potential impact. Where PD models are used, PD term structures, much like term structures used for managing interest rate risk, will need to be developed to align with the average life of the loan for each portfolio.

Reasonable and supportable forecasts

The estimate produced by the CECL model would be founded on management's assessment of current conditions and forecasts about future conditions. Some considerations in developing forecasts include:

- Significant reliance on judgment where detailed long-term forecasts are not available.
- Regulatory stressed scenarios not intended to be used directly for accounting purposes.
- Development and documentation of processes to demonstrate appropriate macroeconomic scenarios used in ALLL estimation under CECL (i.e., scenario generation).
- Consistent application of macroeconomic forecasts and other relevant information where credit risk drivers of the portfolios are affected by forecasts/assumptions in a similar manner.



Points of convergence

While CECL represents a significant change in accounting for the allowance, current credit risk measurement approaches used for Basel regulatory capital calculations, economic capital, and stress testing (CCAR/DFAST) provide some elements that can be potentially leveraged for CECL. The underlying transition matrix, loss curve, and expected loss (EL) framework loss estimation methodologies, among others, have several points of convergence that can be leveraged through an integrated approach. Some key examples include:

- **Balance sheet mapping/exposure identification.** Common definitions and classifications of both on and off balance sheet exposures allow for a holistic balance sheet mapping and ongoing exposure identification activities.
- **Data sourcing.** Given the significant overlap of data requirements (e.g., balance amounts, obligor data), upfront activities to align efforts can reduce redundant data.
- **Infrastructure.** Common components including enterprise level data warehouses and related activities such as common data quality protocols can simplify infrastructure design, reduce cost, and enhance operational efficiencies.
- **Processes and controls.** Common processes and control points can be identified and leveraged to reduce the implementation and operational burden.
- **Risk models and valuation engines.** Quantitative tools can be aligned and calibrated for use across the capital management framework to ensure consistency.

Exhibit 2 lays out some common factors used in calculating regulatory capital, stress testing. It also describes how they are—or should be—used for each estimation exercise.

Exhibit 2. Points of convergence

	Basel	Stress testing (CCAR, DFAST)	CECL
Probability of default (PD)	One-year through-the-cycle PD	Stressed PD aligned with forecast horizon	Life-of-loan, point-in-time PD
Loss given default (LGD)	Downturn LGD	Life of the loan	Life of the loan
Other factors (macroeconomic, etc.)	Not prescribed, but effective oversight should include macroeconomic factors in assessing reasonableness of regulatory capital estimates	Forecasts are 13 quarters in length	Macroeconomic forecasts need to align with the same time horizons used in assessing PD and LGD; assumptions need to be documented and relationships to the portfolio and the allowance need to be demonstrated

Practical solutions

PD models have widespread use in the financial services industry on a range of portfolios and exposure types.

- Under the incurred loss model, the number of months used in the PD forecast horizon corresponds to the LEP over which inherent losses are estimated (e.g., one-year PD estimates correspond to a twelve-month LEP).
- Under CECL, this would change to using a life-of-loan concept as the starting point for estimating expected credit losses.

In order to estimate PDs under CECL, a bank must calculate its loan portfolio's average life, which should then be translated into a term structure for PD. The following steps illustrate a potential approach for performing such an exercise.

Step 1. Calculate the average life of the loan for each portfolio segment

The following are some common methods to calculate the life of a loan:

- Weighted average life, which is the average time until a dollar of principal is repaid. The principal amount is not discounted.
- Duration, which is the weighted-average time to receive the discounted present values of all the cash flows (including both principal and interest).
- Weighted average maturity, which is the average of the maturities of the loans in a pool.

Step 2. Estimate new PDs for each segment of the portfolio using that segment's average life

This concept can be seen as being analogous to tenor/maturity matched funds transfer pricing used in balance sheet management, where costs of funds are aligned to the assets based on the interest rates in effect at the time, based on the asset's time to maturity. Under the CECL paradigm, in essence, the ALLL should help bring an asset's credit and market risks into closer alignment, which will assist companies with developing a more fulsome picture of the risks their assets contain.

Step 3. Analyze the impact

- Re-estimate ALLL model with life-of-loan PDs instead of PDs tied to loss emergence periods.
- As applicable, develop LGD analyses that relate macroeconomic data to loss severities and collateral recovery rates, to assess and document any relevant relationships between changes in the economy with changes in the portfolio's loss history.
- Re-estimate credit conversion factors or loan equivalents used in the estimation of exposure at default (EAD).
- Layer in additional CECL components, such as reasonable and supportable forecasts into qualitative factors.
- Develop an analysis showing the incurred loss model result, expected life-of-loan model estimate, and other CECL components to explain prospective changes in the allowance under the CECL framework vis-à-vis the current incurred loss approach.
- Socialize with key stakeholders, including the entity's internal audit department and external auditors.

Next steps

To prepare for CECL, develop an implementation framework that aligns with the company's strategy. Board members should push risk management to be prepared for the transition so that the change in the reserve estimate under CECL is transparent to regulators and external auditors from modeling and process standpoints. Exhibit 3 illustrates a high-level implementation framework that can be used to guide the institution's adoption of the CECL standard.

Exhibit 3. Illustrative implementation framework

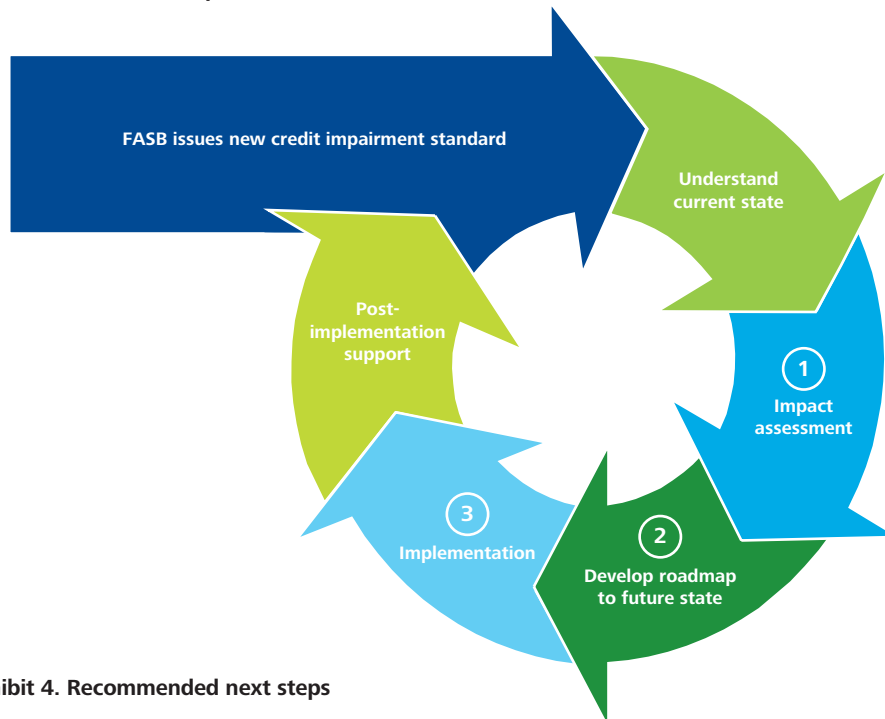


Exhibit 4. Recommended next steps



Successful implementation of the CECL standard will also require a well-thought-out tactical plan to meet the implementation framework's objectives. One way to operationalize the CECL implementation is to develop a CECL playbook that includes detailed roadmaps describing how initiatives will be implemented. Exhibit 4 provides some recommended next steps in assessing and planning for CECL adoption, above and beyond the development of a CECL playbook.

An effective CECL implementation requires the development of a unified strategy, operationalized with a CECL playbook, a detailed execution plan, and proper governance to oversee implementation.

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