Designing responsive solutions to meet your CECL business needs

The Financial Accounting Standards Board’s (“FASB”) new CECL standard changes how banks and other nondepository lending institutions (collectively, “institutions”) estimate their credit losses for loans and debt securities. While CECL offers wide latitude in possible modeling approaches by not prescribing specific quantitative requirements, developers and modelers should appreciate the standard’s objectives and the intended use of model output by an institution’s finance, accounting, and reporting functions.

We believe that, given the combination of a principles-based standard with a complex end-to-end production process, the implementation of CECL will be significantly more complex than that of other accounting standards. For many institutions, the importance of the allowance for credit losses to the financial statements taken as a whole will elicit additional scrutiny of management’s implementation of the CECL standard, particularly as it relates to the modeling of expected losses.

The selected model(s) will need to consider an institution’s asset mix, technology infrastructure, and analytics capabilities. The interaction of accounting policy choices with data availability, systems architecture, and downstream usage should guide model development. Finally, the computational burden created by increasingly complex models could pressure financial reporting timelines (e.g., month-end close) and should be considered in the model development process.

We will examine CECL model development and implementation considerations, as well as the suggested steps that institutions can take in developing design solutions that are consistent with the standard and responsive to end users’ needs.
Developing and implementing CECL estimation models

How do you pick the model that’s right for you?

While a variety of potential quantitative modeling approaches exists to calculate expected credit losses, the choice of method can often be affected by other considerations and limitations. Although sophisticated statistical and econometric modeling techniques could, theoretically, be used, the practical limitations of data availability and computational infrastructure constraints might call for alternative methods.

Significant considerations that, in our view, should influence the development and implementation of CECL models include:

Rationalization of CECL model “fitness for use” analyses: While institutions use credit loss models for various business purposes, including pricing, economic capital, and stress testing, some precepts and objectives of the CECL standard diverge from these other uses. Institutions should be prepared to explain and justify differences between modeling approaches for these various purposes.

Reasonable and supportable forecasts: Institutions will need to incorporate reasonable and supportable forecasts into the allowance for credit losses. The ability to reliably forecast and document the determinants of credit risk is an extremely challenging task, particularly given that these determinants can vary across the dimensions of products, market segments, and time.

Understandability: Boards of directors, audit committees, and management will need to understand and explain model output and changes in the resultant allowance for credit losses. As such, the impact of changes to the various inputs needs to be comprehensible and transparent to all users, not just those with knowledge of quantitative methods.

Tractability: The complexity of models, as well as compressed financial reporting timelines (e.g., earnings releases are sometimes within two to three weeks of the quarter-end close), can put pressure on the current information technology infrastructure. These timelines should be considered in model assessment and development. This would include not only model processing time, but equally as important, the execution of relevant internal controls and model validation.

Efficient and accurate production cycle: The timely production of expected credit loss estimates and the related disclosures could place a significant burden on the capacity of an institution’s computational infrastructure, as well as on the staff running models and compiling results. Smaller institutions, in particular, may have a challenging time complying with the requirements of CECL as the demands of CECL compliance on resources will be more intensive relative to those of legacy requirements.

Executives are justifiably concerned about developing CECL models

Deloitte’s US CECL survey polled senior executives at 31 US institutions to assess how they are planning to implement CECL and gauge the operational and financial impacts they expect. Executives most often cited development of statistical CECL models (29 percent) as their most challenging implementation task under CECL (figure 1), while 22 percent name model governance/internal controls as a top challenge of model risk management under CECL.¹

Figure 1: Most challenging CECL implementation task

- Development of statistical CECL models
- Obtaining data necessary for credit modeling and loss estimation
- Defining data requirements to support model development
- Design and implementation of revised and/or new processes and controls
- Overall systems architecture for the calculation and reporting of CECL
- Enhancements to governance and to risk and compliance programs

Developing and implementing CECL estimation models

While institutions can extend their existing analytical infrastructure to comply with CECL’s expected credit loss requirements, organizations will likely need to modify, enhance, or replace their current qualitative and quantitative allowance methodologies. Executives responding to Deloitte’s US CECL survey (figure 2) stated that their credit and impairment models most often have capabilities at the portfolio/segment level (e.g., risk grade, loan-to-value, vintage, remaining maturity) (80 percent), and for multiple segmentation options (73 percent). However, more than 90 percent of institutions either currently have or plan to develop these and other capabilities. Only 17 percent of institutions had the capability of generating a high-level report comparing CECL to other loss estimates, but an additional 77 percent plan to develop it.

When deciding to adapt their existing models or create new models to meet CECL requirements, organizations should identify those steps in their loss estimation processes that involve subjectivity, that can be expected to be replaced or redefined over time, and that are stable, so that appropriate documentation and internal controls may be developed. Institutions also should understand requirements to implement models in a production environment (e.g., how long it takes to produce results and whether changes to existing technology infrastructure are needed).

Finally, institutions should anticipate that CECL processes will evolve as regulators and auditors become familiar with implementation issues. Designing an infrastructure today that is conducive to changes will contribute to future financial reporting efficiency.

**Figure 2: Capabilities in credit and impairment models**

<table>
<thead>
<tr>
<th>Capability</th>
<th>Have capability</th>
<th>Plan to implement</th>
</tr>
</thead>
<tbody>
<tr>
<td>Portfolio/segment level</td>
<td>80%</td>
<td>17%</td>
</tr>
<tr>
<td>Multiple segmentation options</td>
<td>73%</td>
<td>23%</td>
</tr>
<tr>
<td>Sensitivity analysis</td>
<td>67%</td>
<td>27%</td>
</tr>
<tr>
<td>Risk parameter calculation</td>
<td>60%</td>
<td>40%</td>
</tr>
<tr>
<td>Ability to trace expected losses to the loan or security level</td>
<td>60%</td>
<td>37%</td>
</tr>
<tr>
<td>Econometric default models</td>
<td>57%</td>
<td>33%</td>
</tr>
<tr>
<td>Structured impairment analysis at sub-portfolio level</td>
<td>47%</td>
<td>30%</td>
</tr>
<tr>
<td>High-level report comparing CECL to other loss estimates</td>
<td>17%</td>
<td>77%</td>
</tr>
<tr>
<td>Reconciliation of marginal pricing to CECL loss estimates</td>
<td>10%</td>
<td>40%</td>
</tr>
<tr>
<td>Report comparing CECL to IFRS 9 impairment</td>
<td>7%</td>
<td>40%</td>
</tr>
<tr>
<td>Integration of trading book models into banking loan evaluation</td>
<td>20%</td>
<td>20%</td>
</tr>
</tbody>
</table>

Developing and implementing CECL estimation models

How to get started

To design solutions that are consistent with the CECL standard and responsive to end users’ needs, institutions should consider taking the following steps:

1. Identify the key stakeholders and assemble a project team that includes modelers and accountants, among other functions. Ensure that everyone understands how all functions will contribute to CECL model development, implementation, and ongoing production.

2. Proactively engage risk, accounting policy, financial reporting, and data/technology functions to develop clear business requirements documents and implementation plans that address:
   • Accounting policy decisions
   • Provenance, meaning, and institutional understanding of data elements used for historical estimation and in a production environment for forecasting
   • Assumptions and limitations of models, including protocols for justifying the direction and magnitude of qualitative adjustments

3. Assess the institution’s current allowance process from start to finish. Knowing the dependencies and limitations of current processes can help to identify potential concerns or challenges with CECL implementation.

4. Identify opportunities to leverage existing models and data sets, and address quality and availability of data and assumptions.

5. Outline steps to align existing qualitative methodology/framework to CECL requirements.

6. Define technology architecture requirements so that computing capabilities are synthesized with financial reporting timelines and requirements.

7. Concurrent with model development, create documentation that is attuned to the perspective of auditors and regulators to expedite their review of the models.

As institutions progress through the above steps, they should keep in mind the considerations previously highlighted. While the modeling approach is an important determination for the implementation of CECL, considerations related to the understandability and the tractability of producing results should influence the selected approach. As an additional consideration, institutions should develop the requisite governance processes, including initial validations, to help ensure that the new models are functioning appropriately and consistently with their intended use. After implementation, periodic validation, proper oversight, and internal controls are needed to help ensure that the models continue to meet their original objectives.

The implementation of the CECL standard will be challenging. Deloitte has the depth and breadth of experience to assess the challenges and assist with all phases of implementing CECL.

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