

# INTELLIGENT RISK

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## the impact of the Current Expected Credit Loss (CECL) framework for the provisioning of credit losses on financial institutions

by **Michael Jacobs, Jr.**<sup>1</sup>

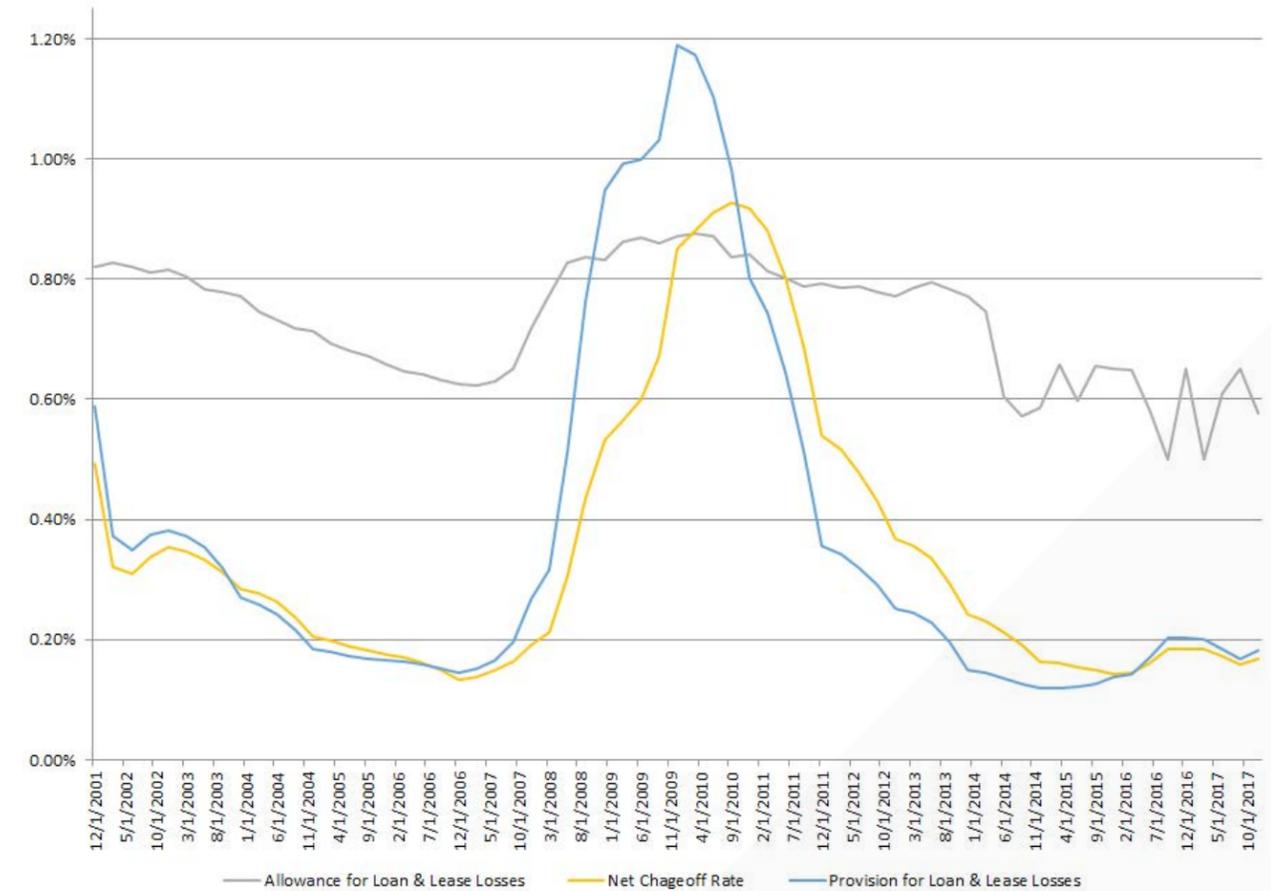
In the United States, the Financial Accounting Standards Board (“FASB”) issues the set of standards known as Generally Accepted Accounting Principles (“U.S. GAAP”), a common set of guidelines for the accounting and reporting of financial results. In this paper we focus on the guidance governing the Allowance for Loan and Lease Losses (“ALLL”), the financial reserves that firms set aside for possible credit loss on financial instruments. The recent revision to these standards, the current expected credit loss (“CECL”; FASB, 2016) standard, is expected to substantially alter the management, measurement and reporting loan loss provisions. The prevailing

ALLL loss standard for U.S. has used been the principle of incurred loss, wherein credit losses are recognized only when it is likely that a loss has materialized. This is a calculation as of the financial reporting date and future events are not to be considered, which impairs the capability of managing reserves prior to a period of economic downturn. The result of this deferral implies that provisions are likely to be volatile and subject to the phenomenon of procyclicality, which means that provisions rise and regulatory capital ratios decrease exactly in the periods where we would prefer the opposite.

In Figure 1 we illustrate the procyclicality of credit loss reserves under the incurred loss standard. We plot net charge-off rates (“NCORs”), the provisions for loan and lease losses (“PLLL”) and the ALLL for all insured depository institutions in the U.S., sourced from the FDIC Call Reports for the period 4Q01 to 4Q17. NCORs began to their ascent at the start of the Great Recession in 2007, while PLLLs exhibit a nearly coinciding rise, while the ALLL continues to rise well af-ter the economic downturn and peaks in 2010, nearly a year into the economic recovery. This coincided with a deterioration in bank capital ratios, which added to the stress on bank earnings, impairing the ability of institutions to provide sorely needed loans and contributing to the slug-gishness of the recovery in the early part of the decade.

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Figure 1: Net Charge-off Rates, Provisions as a Percent of Total Assets and the ALLL – All Insured Depository Institutions in the U.S. (Federal Deposit Insurance Corporation Statistics on Depository Institutions Report – Schedule FR Y-9C)



In the remainder of this article we discuss of some of the practical challenges facing institutions in implementing CECL frameworks.

In Figure 2 we depict the regulatory timeline for the evolution of the CECL standard. In the midst of the financial crisis during 2008, when the problem of countercyclicality of loan loss provision came to the fore, the FASB and the IASB established the Financial Crisis Advisory Group to advise on improvements in financial reporting. This was followed in early 2011 with the communication by the accounting bodies of a common solution for impairment reporting. In late 2012, the FASB issued a proposed change to the accounting standards governing credit loss provisioning (FASB, 2012), which was finalized after a period of public comment in mid-2016 (FASB, 2016); meanwhile the IASB issued its final IRFS9 accounting standard in mid-2014 (IASB, 2014). The IRFS9 standard was effective as of January, 2018, while CECL is effective in the U.S. for SEC registrants in January, 2020 and then for non-SEC registrants in January, 2021; however, for banks that are not considered Public Business Entities (PBEs), the effective date will be at December 31, 2021.

Figure 2: The Accounting Supervisory Timeline for CECL and IRFS9 Implementation

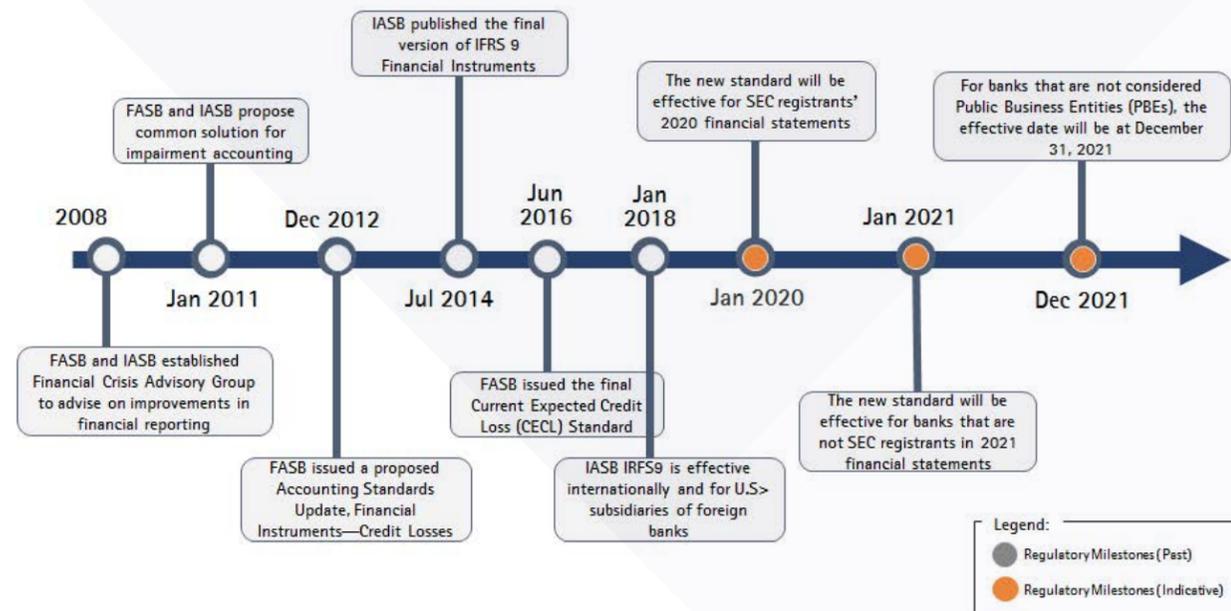


Figure 3: The CECL Accounting Standard – Regulatory Overview

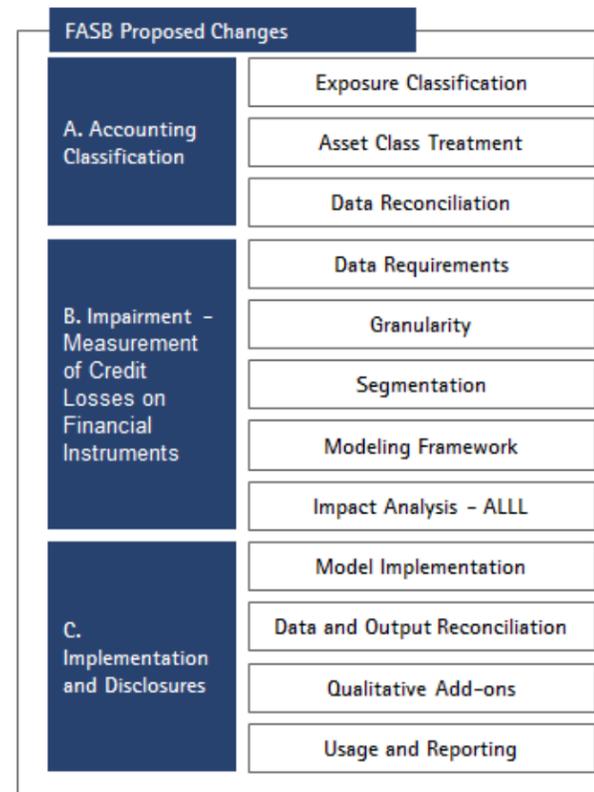
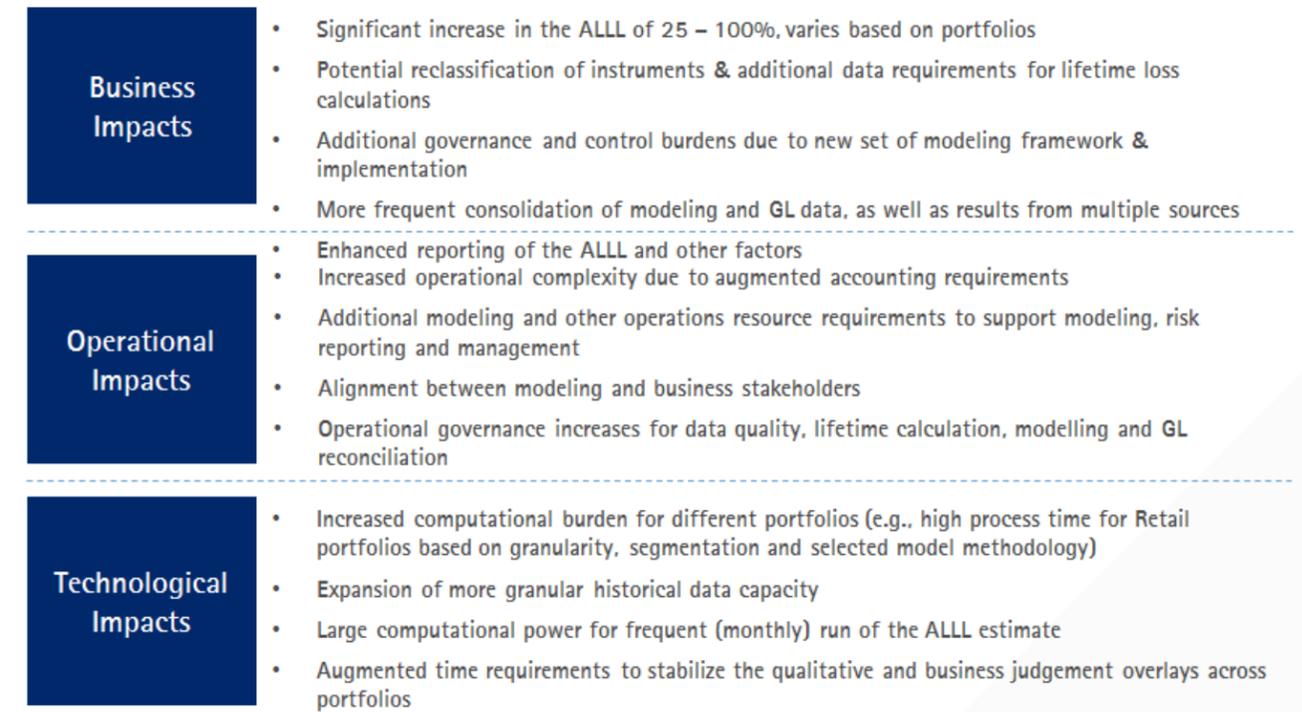


Figure 4: Key Business Impacts of the CECL Accounting Standard



In Figure 3 we depict some high-level overview of the regulatory standards and expectations in CECL. The first major element, which has no analogue in the legacy ALLL framework, is that there has to be a clear segmentation of financial assets, into groupings that align with portfolio management and which also represent groupings in which there is homogeneity in credit risk. This practice is part of traditional credit risk modeling, as has been the practice in Basel and CCAR applications, but which represents a fundamental paradigm shift in provisioning processes. Second, there are changes to the framework for measuring impairment and credit losses on financial instruments, which has several elements. One key aspect is to enhance the data requirements for items such as troubled debt restructurings (“TDRs”) on distressed assets, and lifetime loss modeling for performing assets. This will a definition of model granularity based on existing model inventories (i.e., for Basel and CCAR), data availability and a target level of accuracy. Moreover, this process will involve the adoption of new modeling frameworks for provision modeling. Finally, institutions will face a multitude of challenges around implementation and disclosures. This involves enhanced Implementation platform for model and reporting (e.g., dashboards), as well as revised accounting policies for loans and receivables, foreclosed and repossessed assets and fair value

Figure 5: Best Industry Practices in Implementing the CECL Accounting Standard

<b>1. CECL Regulatory Requirements Analysis</b>	<ul style="list-style-type: none"> <li>Mapping of CECL requirements to different bank functions and teams</li> <li>Analysis of data sources required for compliance</li> </ul>	<ul style="list-style-type: none"> <li>Development of a common and consistent internal interpretation of what is required for new framework</li> </ul>
<b>2. Gap Analysis and Solution Design</b>	<ul style="list-style-type: none"> <li>Defining the scope and body of work for the new CECL model methodology</li> <li>Informing and defining the framework for ALLL estimation and the impact on the bank</li> <li>Developing and evolving capabilities for new data requirement and modeling frameworks</li> <li>Developing a strategy for engagement with</li> </ul>	<ul style="list-style-type: none"> <li>accounting and other stakeholders</li> <li>Executing readiness of the technological environment</li> <li>Developing an internal point of view or position paper on activities required for compliance</li> </ul>
<b>3. Model Development</b>	<ul style="list-style-type: none"> <li>Develop modeling frameworks for PD term structure, spot LGD &amp; EAD, and lifetime loss calculations</li> <li>Developing the cash flow and simulation engines</li> </ul>	<ul style="list-style-type: none"> <li>for the ALLL calculation</li> <li>Supporting model validation and implementation challenges</li> </ul>
<b>4. End-to-end Implementation</b>	<ul style="list-style-type: none"> <li>End-to-end implementation frameworks for CECL, including, data, process, workflow, simulation, etc.</li> <li>Consideration of long term sustainability and</li> </ul>	<ul style="list-style-type: none"> <li>efficiency</li> <li>Development of methodological inputs and reviews for accurate implementation</li> </ul>
<b>5. Automated and Standardized Reporting</b>	<ul style="list-style-type: none"> <li>Defining and designing the reporting framework for regulators and internal stakeholders covering the existing and future views</li> <li>Standardization and automation of the monthly</li> </ul>	<ul style="list-style-type: none"> <li>reporting process</li> <li>Executing an end-to-end impact assessment and reporting</li> </ul>

Figure 6: Data Considerations and Challenges in Implementing the CECL Accounting Standard

- Data Quality** – significant effort in reconciliation with General Ledger, missing value treatment, outlier treatment, data validation, and data transformation for CECL models
- Sufficient number of accounts and defaults** –Due to the requirement to analyze the whole life of the loan, shortage of sufficient number of accounts for modeling in some portfolios
- Availability of origination date and origination variables**
- Availability of historical as well as forecast of macroeconomic factors** - Historical values of macroeconomic factors for model building. Accuracy of multi-year forecast of macroeconomic factors for the calculation of ‘forward looking’ Expected Credit Loss (ECL) estimates
- Calculation of ‘Lifetime’ for revolving loans**
- Data Infrastructure** - Implementation of CECL will require large volume of high quality data.

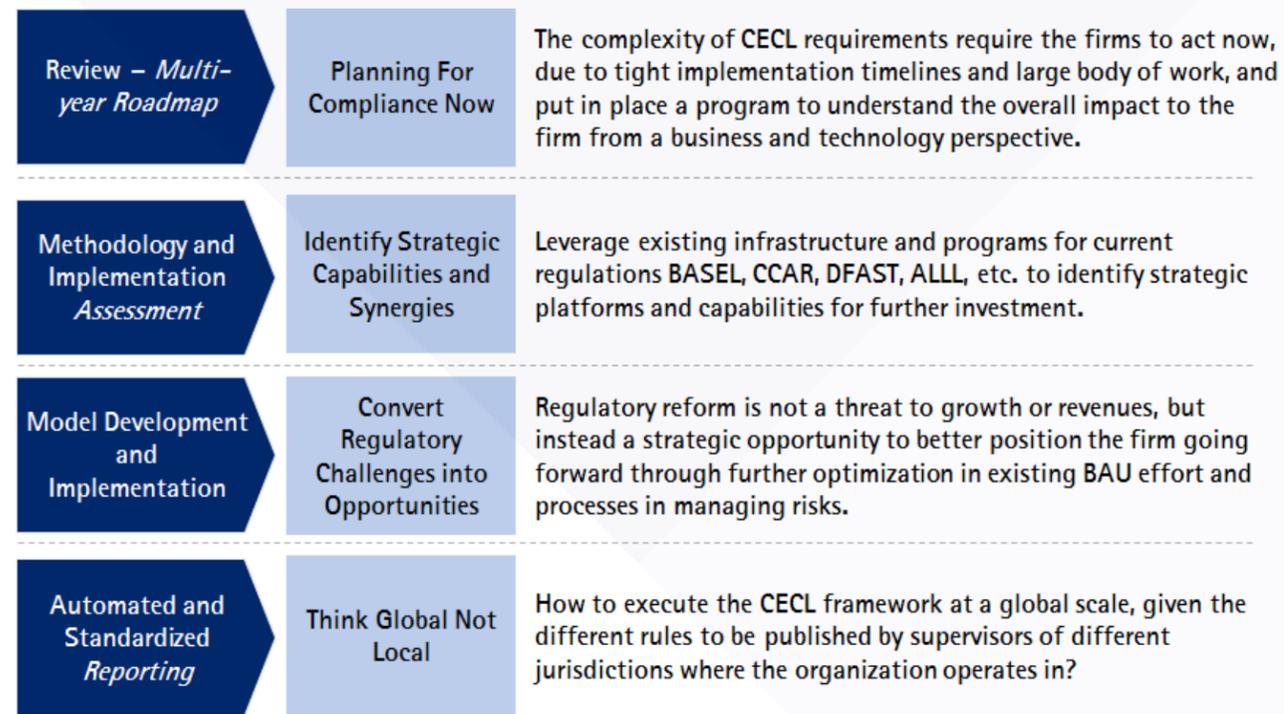
Figure 7: Modeling Considerations and Challenges in Implementing the CECL Accounting Standard

Areas	Category	Considerations / Challenges
Segmentation	Criteria	<ul style="list-style-type: none"> <li>Lending exposures should be grouped according to shared credit risk characteristics and the basis of grouping should be reviewed to ensure that exposures within the group remain homogeneous in terms of their response to credit risk drivers.</li> <li>Exposures must not be grouped in such a way that the credit risk of particular exposures is masked by the performance of the group as a whole.</li> <li>Groups should be sufficiently granular to allow banks to group exposures into portfolios with shared credit risk characteristics.</li> <li>Grouping implemented upon initial recognition based on similar credit risk characteristics will not necessarily be appropriate subsequently.</li> </ul>
	Data Limitation	<ul style="list-style-type: none"> <li>If a bank’s individual assessments of exposures do not adequately consider forward-looking information, it is appropriate to group lending exposures with shared credit risk characteristics to estimate the impact of forward-looking information.</li> </ul>
Model Methodology	Definition	<ul style="list-style-type: none"> <li>The default definition is not defined explicitly, but the definition used for capital adequacy/internal credit risk management should be used (qualitative + objective criteria – rebuttable presumption of 90 DPD).</li> </ul>
	Estimation	<ul style="list-style-type: none"> <li>Consider the relevant internal and external factors that may affect ECL estimates, such as the underwriting standards applied to a lending exposure at origination and changes in industry, geographical, economic and political factors.</li> </ul>
	Incorporation of forward looking information	<ul style="list-style-type: none"> <li>Important to consider forward looking information, including macro factors. Bank should use experienced credit judgement to assess qualitative and quantitative factors and incorporate all relevant information without bias which is reasonably available without undue cost.</li> <li>Banks should be able to demonstrate that the forward-looking information factored into the ECL estimation process has a link to the credit risk drivers for particular exposures or portfolios.</li> </ul>

Figure 8: Implementation Considerations and Challenges in the CECL Accounting Standard

Areas	Category	Considerations / Challenges
Implementation	Data / System Requirements	<ul style="list-style-type: none"> <li>Data underlying most current ALLL estimates – current charge-off ratios, PDs, LGDs, EADs and rates based on past due status – are not based on a life-of-loan loss concept. These rates, based on activity during specific time periods (such as one year), do not satisfy the life-of-loan loss expectation requirement.</li> <li>Therefore, systems must be reconfigured and static pools must be maintained to adequately provide appropriate LOL loss rates.</li> </ul>
	Credit Metrics	<ul style="list-style-type: none"> <li>Because expected losses are recorded at origination, there will be no natural relationship between the levels of key credit metrics – e.g., current delinquencies, loan to value ratios, impaired loans, annual charge offs or annual loss rates, TDRs – to the current ALLL or the loan loss provision, therefore, they may not necessarily be used to forecast credit losses.</li> <li>It is necessary to devise and rely on other types of credit metrics in order to evaluate the reasonableness of credit loss forecasts.</li> </ul>
	Reporting	<ul style="list-style-type: none"> <li>Under CECL’s life-of-loan concept new loan commitments are expected to have an impact on profit and loss and must be closely tracked.</li> <li>Because of the relatively large “day 1” impact to net income and capital, quarter-end cut-off procedures will now be a larger focus of the audit function, and as a result banks may require longer closing periods from the current reporting timeframes.</li> </ul>

Figure 9: Roadmap Forward for an Efficient Implementation of the CECL Accounting Standard



In Figure 5 we depict these best industry practices. The new CECL standard is expected to have a significant business impact on the accounting organizations of financial institutions by increasing the allowance, as well as operational and technological impacts due to the augmented complexity of compliance and reporting processes, as summarized in Figure 4. Institutions will need to develop an acumen of best practice activities: project experience in supporting CECL programs and investing in assets and tools that enable the institution to accelerate the model development, implementation and reporting work required in CECL initiatives. As shown in Figure 6. The CECL effort requires an additional reconciliation of regulatory modeling data with business (General Ledger) and other sources to ensure the consistency and transparency of the results. CECL guidance provides a high-level expectation for modeling the “life of loan” which needs to be accurately interpreted and captured in the model development process, which we enumerate in Figure 7. An efficient and automated system is the key for a successful CECL rollout across the bank, creating distinct implementation considerations and challenges, which we show in Figure 8. In summary, as shown in Figure 9, we highlight that an efficient and automated system is the key for a successful CECL rollout across the bank, creating distinct implementation considerations and challenges.

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Mike Jacobs is a lead model development and analytics expert across a range of risk and product types, having a focus on wholesale credit risk methodology, regulatory solutions and model validation. Mike has 25 years of experience in financial risk modeling and analytics, having worked 5 years at Accenture and Big 4 consulting as a Director in the risk modeling and analytics practice, with a focus on regulatory solutions; 7 years as a Senior Economist and Lead Modeling Expert at the OCC, focusing on ERM and Model Risk; and 8 years in banking as a Senior Vice-President at JPMC and SMBC, developing wholesale credit risk and economic capital models. Skills include model development & validation for CCAR, PPNR, CECL, credit / market / operational risk; Basel and ICAAP; model risk management; financial regulation; advanced statistical and optimization methodologies. Mike holds a doctorate in Mathematical Finance from the City University of New York – Zicklin School of Business and is a Chartered Financial Analyst.