

# Meeting the CECL data challenge

Establishing information practices that match your credit cycle and strategic needs

CECL reporting will be driven by data and information systems. Data is how the risk management, finance, and accounting functions will come together to comply with CECL—this is where institutions need to focus their attention and investment.

The data required for CECL characterizes the profile of an asset, its historical performance data and external information that could influence the performance of the asset, such as macroeconomic data. Data will range from sub-ledger level data elements necessary to link accounting and finance risk factors, include supplementary information that support internal processes such as approvals, reconciliations, and strategic business decisions; and build to the mandatory financial statements and disclosures required by CECL.

## Understanding the CECL data challenge

As you shape your CECL solution and determine how you will produce credit loss estimates, reports and disclosures, a number of business process level questions will shape your data needs:

- What data will you need to reconcile to ensure integrity of data processes?
- How will risk management processes integrate with CECL processes?
- What data will you need to produce accounting templates?
- Will your CFO need supplemental information to perform attestation of financial statements?
- How will you align business-as-usual data flows with CECL workflows for automation?
- How could CECL cycle forecasts impact business strategy and what information will be needed to support those decisions?
- Is there adequate transparency of data processing for internal and external audit?
- Can current information systems deliver the frequency and volume of data processing necessary for CECL?
- What information is needed to support the external notes that accompany financial disclosures?



Answering those questions isn't easy. Remember, regulatory guidance is not prescriptive concerning many data issues. The earlier you identify your data needs, the more time you will have to remediate them. Many institutions have insufficient data to characterize their portfolios, which affects modeling and may require subjective processes and transparent disclosures. Specific data challenges many institutions have to address include:

- Poor data quality
- Insufficient historical data or loss history
- Externally sourced data that does not match portfolio credit quality
- Multiple data systems and dictionaries
- Issues with portfolio segmentation and account selection
- Acquisition of portfolios with incomplete portfolio and performance data
- Poor data governance
- Operating models

Sustaining a CECL data environment will present new challenges in terms of evolving data to support the changing business environment.

## Mapping CECL data to your credit cycle and business processes

An institution's credit lifecycle is the backbone for CECL processes, which presents many implications for business-as-usual credit tasks such as originations, credit quality, credit pricing, portfolio management, cross-selling, and loan-workout policies to name a few.

Figure 1 presents a summarized CECL Data Ecosystem embedded into a typical end-to-end credit lifecycle. For the purposes of this illustration we are concerned with a typical retail asset such as a mortgage, auto, or credit card. Certainly other in-scope CECL financial assets will add variations to this credit lifecycle. This cycle maps major processes that begin with originations of new accounts and end with the financial reporting. The credit lifecycle is really the fundamental business process that parallels most aspects that are relevant to CECL compliance.



A typical credit lifecycle process revolves around three credit risk management dimensions, 1) the transaction, 2) the borrower, and 3) the portfolio. The transaction itself creates certain data elements that inform CECL, such as term structure and pricing of an asset. Borrower credit strength, reflected by credit scores, past history,

and income, informs borrower willingness and ability to pay. Finally, for assets to be analyzed at the portfolio level, measures such as vintage loss rates and additional risk factors also feed CECL loss estimates.

Let's explore further.

**Figure 1: A CECL data ecosystem**

A CECL data ecosystem: implementation requires integration into credit lifecycle



While this chart can't illustrate all interactions, it demonstrates the direct impact of CECL data on the credit lifecycle processes and the high dependencies of lifecycle processes on various data elements.

For CECL, we introduce the term CKDE (CECL Key Data Element) to delineate data elements that are essential to support CECL processes. The topmost labels in this figure exemplify four data dependencies:

- ACL forecast informs optimal product design
- Financial objectives inform originations strategy
- Vintage data supporting CECL disclosures
- Transformation of Allowance for Credit Losses (ACL) to Accounting Measures.

The timing of these data flows and dependencies needs to be determined. The CECL cycle is a quarterly cycle at a minimum, but already some institutions are planning on monthly internal cycles.

This diagram is only illustrative—there are many other processes that could be included here. For example, institutions will need to create sub-ledger elements to link risk and finance information flows. The key point here is that those processes will need to accommodate the CECL data requirements represented by the Key Data Elements layer in this diagram. In addition, an institution's data governance and IT infrastructure will need to integrate CECL requirements so as to realize economies in terms of duplication and processing of data.

Leading practice:  
CECL presents unique opportunity for an organization to organise and effective data environment to support CECL and strategic business decisions resulting from CECL implementation.



## Practical guidance on CECL data management mechanics

Now that we understand how CECL data is intertwined with business processes, let's focus on what institutions need to do to establish a data environment that supports CECL by asking a few practical questions.

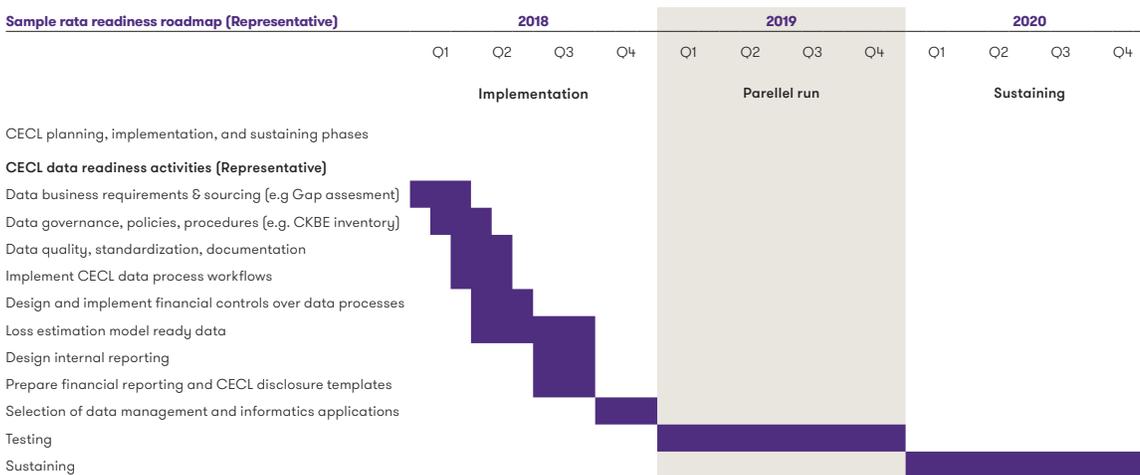
- **What** – What data do I need
- **Who** – Who provides the data and Who consumes it
- **When** – Timing of data (quarterly minimum cycle)
- **How** – Data workflows and technology supporting CECL processes
- **Why** – Credit and business processes impacted by CECL
- **What** – Level of data granularity and quality will be required to support advanced analytical and potentially machine learning approaches to CECL estimations

## A CECL data readiness roadmap

The final step in implementing a CECL data environment is to develop a data readiness roadmap. The plan should contemplate data readiness and future data maintenance activities that will accommodate changing requirements. This roadmap should consider the business processes impacted, the credit lifecycle, and the answers to the practical questions on data mechanics. Look for opportunities to leverage infrastructural elements from CCAR (Comprehensive Capital Analysis and Review), IFRS (International Financial Reporting Standards), BCBS239 (Basel Committee Bank Supervision Guidance for Risk Data Aggregation), and other initiatives.

Figure 2 presents a sample Data Readiness Roadmap. Note that these activities are typically performed in an integrated manner and as part of a broader CECL implementation program. It's difficult to do this if not connected to other key CECL components.

**Figure 2: Sample data readiness roadmap**



**Figure 3: Leading practice sample data business requirements document**  
 Prototype CECL

Assets held for investment	Data elements required to forecast losses	Data elements of data properties required for CECL	Data transformations acceptability	US GAAP requirements (TBD)	Forecasting losses alternatives /methodologies	CECL acceptability, conditions
CRE						
	<b>Data fields for PD</b>	Origination amount		Quarter difference (Subtraction/division including Lagging of more than 1 quarter)		• Time Series Models-top down approach
	LTV	Outstanding balance				
	DSCR	Legally binding amount				
	Vacancy rate	IO months				
	Dummy for state	Amortization type				
	delinquency 30, 60 and 90	Amortization period months				
	Impaired	Property type				
	Change in CRE index over 4 quarters	Loan purpose (buy, land, construction)				
	<b>Sponsor/developer experience level</b>	Origination date				
	<b>Data fields for LGD</b>	Facility maturity date				• Stepwise beta regression
	LTV	Interest rate	Logarithm transformation			• Logistic Regression Model bottom-up approach for PD
	Time to resolution	Borrower option to renew	Capping/flooring			• Generalized Linear Regression Model-bottom-up approach for LGD
	PV of the property at the time of resolution	Int. and ext risk rating	log odds transformation			• Tobit regression
	State code		Normalization			• Ordinary least squares
	Outstanding balance		Winsorization			
	<b>Independent property inspections</b>					

\*This template is for illustrative purposes only. Refer to ASC 326 Section 20-55 Implementation Guidance and Illustrations – General includes inventory for suggested "Information considered when estimating expected credit losses"

For example, quality processes require data governance and policies to be in place, etc. It is also imperative that institutions assemble a comprehensive set of data business requirements (sample shown on Figure 3) that include data sourcing, data characterization, data workflows, data transforms, and other activities. Some institutions will prioritize data capabilities for the first submission cycle and then consider automation, other innovations and longer term platform designs after first cycle learnings.

Leading Practice: Practice a complete set of business requirements for data will be a worthwhile effort. Make sure requirements go beyond sourcing data and include specific requirements for modeling, needs for internal and external reporting, controls testing, and other internal requirements.

## A vision for steady-state CECL data environment

Data is at the center of a successful CECL implementation, but this is a complex and costly undertaking for most institutions. Careful planning should include a multi-year staged approach to standing up a data environment and inventorying a full set of data requirements. Institutions should embrace the integrated nature of CECL data to the credit lifecycle and business functions when designing a CECL solution. Finally, institutions should take CECL as an opportunity to make investments in data processes that will help them meet strategic business objectives.

Grant Thornton delivers practical, innovative, and holistic programs and solutions to address CECL challenges and related data management needs.

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