Current Expected Credit Loss (CECL):

Planning and Moving Forward

Written by:

Namit Sureka
Practice Lead, Banking Analytics

Vikas Sharma
Practice Lead, Banking Analytics

Ashutosh Bhardwaj
Vice President, Analytics

Contributors:

Ramkesh Meena
Engagement Manager, Analytics

Varun Aggarwal
Senior Engagement Manager, Analytics

Manish Jain
Senior Engagement Manager, Analytics

Jason Rivera
Project Manager, Analytics
lookdeeper@exlservice.com

EXL
look deeper.®

Current Expected Credit Loss (CECL):
Planning and Moving Forward

CECL Origins- The financial crisis of 2007-2009 revealed systemic weaknesses throughout the global financial sector, particularly the costs of delayed recognition of credit losses. As macroeconomic conditions started to turn downward, the balance sheets of banks and other lenders seemed too healthy.

Indeed, the incurred loss model of loss reporting and provisioning required that lenders only provision for losses already incurred, and not for those losses they expected. By the time the losses were recognized, it was too little, too late. Among other areas of financial sector practices, the incurred loss provisioning practice came under scrutiny, as this practice is believed to contribute to pro-cyclicality by spurring excessive lending during booms and sudden, sharp reductions in lending during busts.

Post-crisis, central banks, governmental bodies and industry regulators called for a revision of the accounting standards used by banks to diminish pro-cyclicality and improve provisioning practices for credit losses. In 2014, the International Accounting Standards Board (IASB) released IFRS 9, Financial Instruments, which requires entities to determine their loss provisioning using Expected Credit Losses model (ECL). Similarly, the US Financial Accounting Standards Board (FASB) published its updated standards, ASU 2016-13, which also requires that entities report credit loss using Current Expected Credit Loss (CECL) method.

The FASB expects that CECL will allow entities to recognize credit losses and reduce pro-cyclicality, resulting in a more secure financial sector which provides increased consistency across banks on risk management and enhanced transparency with investors and regulators.

Beginning with the fiscal year starting after December 15, 2019, most entities will have to determine Allowances for Loan and Lease Losses (ALLL) based on CECL models. This change will affect more than 5,000 commercial banks in the US and other financial entities that issue debt. The effects of the change on these financial institutions will be significant. The estimated increases to ALLL reserves range from $50 billion to $100 billion (30 to 50 percent) for about $10 trillion of

Current Expected Credit Loss (CECL):
Planning and Moving Forward

applicable loans. Further, these costs will be exacerbated by the cost of implementing the new provisioning regime. Simply put, the challenge lies in budgeting the element of risk management that financial institutions have to predict correctly and changes in the loan loss reserve calculation which can have implications across day-to-day operations

Key considerations and requirements

Key considerations in CECL

CECL changes accounting for loss reserve ratios for entities of various sizes, brings in the concept of life of the loan, digs into the history and demands a more planned approach and project management, especially when doing it for the first time.

Adding to this complexity is the question of finding out the best method for loss reserves considering the changes in the core systems of banks.

The key changes introduced by CECL standard are:

> The CECL standard introduces a "forward-looking" approach and requires entities to consider future conditions which may affect estimations of credit losses, in addition to past and current events, which

are commonly considered under the existing "incurred loss model"

> The CECL standard stipulates that entities estimate the expected credit losses over the lifetime of the financial instruments

> The CECL standard replaces the current practice of multiple impairment models and replaces them with one single impairment model for all financial instruments subject to impairment assessment

Implementation Timeline

June 16, 2016 — FASB issued CECL guidelines

SEC filing public business entities — Dec 15, 2019

Dec 15, 2020 — Other public business entities and non-public entities

Current Expected Credit Loss (CECL):
Planning and Moving Forward

Modeling requirements

In order to make changes as per the CECL standard, entities need to revisit their model library. CECL standard provides only high-level guidance on modeling. It focuses more on the attributes of the resulting estimates and forecasts rather than the technical requirements of the model itself. The entities need to develop modeling approaches that work best for them as per the data availability, complexity and their existing model library. The models, however, should be developed keeping the following in mind:

› **Macroeconomic forecasts** should be forward-looking, i.e., consider expectations of future conditions, not based solely on past deviations from previous expectations. A forecast is not the same as a CCAR or DFAST scenario, and should represent the entities' best estimate of macroeconomic reality.

› **Benign and recovery period** assumptions will need to reflect economic reality. Under CCAR and DFAST stress testing, many entities impose harsh assumptions that tend to overstate losses during economically benign or recovery periods for conservative reasons. Such assumptions are inappropriate and unacceptable under CECL. Again, the goal is to reflect reality, not to overstate a bank's conservatism.

› **Life of loan estimation** is a key factor in estimation. In addition to the generally longer time horizon under CECL, modelers need to consider the proper treatment and estimation of loan modifications and prepayment possibilities.

› **Reversion to the mean** in economic and portfolio forecasts, and timing the reversion, will be critical. Most economic forecasts are reasonably accurate only by a period of six to twelve months. Portfolio forecasts are accurate for a period of one to five years. Beyond these time periods, modelers will need to begin to incorporate historical estimates.

Data and Systems Management

In addition to the above modeling considerations, entities will also have significant data requirements and systems management issues to address. While addressing these issues, entities should come up with solutions which are well integrated with their existing systems, and if new systems are developed, they should be developed from long term perspective.

In either case, moving towards CECL would entail addressing the following:

> **Sourcing and storing** data is the first, and most critical, task. Proper forecasting as per CECL standard requires that entities store data across various lifespans of different assets in their portfolio, which in some cases may be more than 30 years. Further, asset data and data describing economic conditions should span multiple business cycles, creating complete event histories. Once the data is sourced, it will also need to be stored.

> **Addressing data gaps** is necessary in order to determine where and how data is missing. It is extremely unlikely that an entity has 30 or 40 years of back data stored and readily accessible across a single platform. Based on internal data availability, entities may have to integrate different systems or seek external industry and government data to supplement where possible.

> **Preparing and using data for CECL**, should occur simultaneously with addressing data gaps. Here, entities will need to determine and define data fields that correspond with the terminology provided in the CECL standard, determine discrepancies and record the manner used to reconcile the data to the standard. The entities will also need to determine representative historical data periods for forecasting.

> **Automation from ETL to reporting will be critical.** CECL requires that the models produce forecasts much more frequently than CCAR or DFAST loss models, depending on the entity and portfolio. Combined with an increased need for internal oversight and the public-facing nature of the results, the manual processes many entities use for producing stress test results will become untenable and thus automation of every step will be needed.

Disclosure Requirements

Despite all of its drawbacks, the existing incurred-loss model of reporting is conceptually simple and easy for investors, auditors and other stakeholders to understand. Not only are disclosures under CECL inherently more comprehensive due to the increased complexity of the

underlying model, but disclosures are also required to be more granular. Creating clear and concise disclosures will be a necessity for entities, especially when entities may have macroeconomic forecasts that vary from one another.
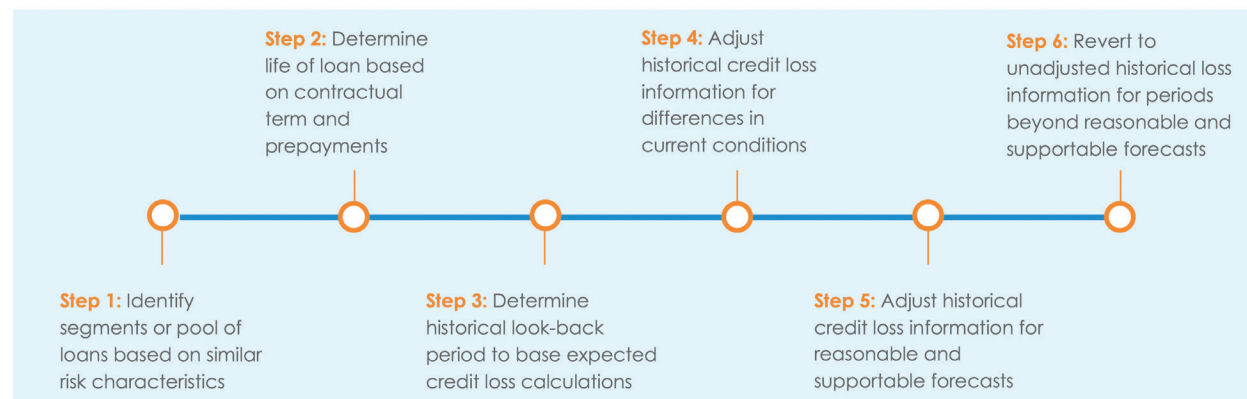
Select CECL measurement methodologies

As mentioned earlier, FASB does not specify any particular approach for CECL measurement and allows all financial institutions to apply methods that reasonably reflect their expectations of the credit loss estimates. This paper exemplifies select approaches.

Loss rate approach

The loss rate approach can be summarized in a 6-step methodology.

The loss rate approach can be summarized in a 6-step methodology.

Step 1: Identify segments or pool of loans based on similar risk characteristics

Step 2: Determine life of loan based on contractual term and prepayments

Step 3: Determine historical look-back period to base expected credit loss calculations

Step 4: Adjust historical credit loss information for differences in current conditions

Step 5: Adjust historical credit loss information for reasonable and supportable forecasts

Step 6: Revert to unadjusted historical loss information for periods beyond reasonable and supportable forecasts

CECL Measurement Using Loss Rate Approach

		Low Risk	Medium Risk	High Risk	Overall
1.	**Loans segmentation** based on similar risk characteristics				
2.	**Life of loan:** 4 years contractual term				
3.	**Historical Look-Back period:** Historical loss rates for 9-year look-back period	2.0%	4.0%	6.0%	3.5%
4.	**Adjustment for current conditions:** Not found significant	-	-	-	
5.	**Adjustment for supportable forecasts** (based on real asset values and unemployment rate forecasts)	0.2%	0.6%	1.0%	
6.	**No adjustment** required for period beyond reasonable and supportable forecast	-	-	-	
	Current Expected Credit Loss Rate	2.2%	4.6%	7.0%	4.0%
	Amortized Cost Basis	USD 30 MM	USD 15 MM	USD 15 MM	USD 60 MM
	CECL Estimate	USD 0.66 MM	USD 0.69 MM	USD 1.05 MM	USD 2.4 MM

Illustration: Consider a bank providing 4-year loans with an amortized cost basis of USD 60 MM. Bank expects real asset values to drop and unemployment rate to increase over next two years.

Current Expected Credit Loss (CECL):
Planning and Moving Forward

Vintage analysis

Vintage analysis measures expected credit losses for a pool of financial assets with similar risk characteristics based on same origination period, historical performance and adjustments for current conditions and reasonable and supportable forecasts. This methodology is useful for financial assets that follow comparable loss curves. Since it focuses on the lifetime of a loan from its origination to end state (payback or charge-off), it provides a reasonable approximation of expected credit losses.

Illustration: Consider a bank providing 4-year auto loans with an agreement to repossess the underlying automobile after 60 days of delinquency.

> Bank expects prepayment history to remain unchanged for calculation of life of loan

> Bank analyzes nine years of historical information on net charge-off rates and observes emergence of historical losses primarily in Year 2 and Year 3

> Bank expects oversupply of automobiles in resale market, impacting loan collateral value

> Bank anticipates increase in unemployment rate during next few years

> Bank does not find any other quantitative or qualitative factor to affect auto loan loss rates

In the light of above information, the bank makes adjustments to historical loss rates for current conditions and reasonable and supportable forecasts (reflected by shaded cells in the table below). For instance, the impact of increase in unemployment rate can be assessed through analysis of its correlation with historical loss curves and a loss factor can accordingly be assigned to the underlying pool of auto loans.

CECL Measurement Using Vintage Analysis

Origination Year	Loan Balance (USD MM)	Historical Loss Experience (Net Charge-Off Rates)					Expected Loss Rate	CECL Estimate (USD MM)
		Year 1	Year 2	Year 3	Year 4	Total		
20X1	140	0.5%	1.2%	1.4%	0.3%	3.4%	-	
20X2	140	0.4%	1.2%	1.4%	0.4%	3.4%	-	
20X3	130	0.4%	1.1%	1.5%	0.3%	3.3%	-	
20X4	160	0.6%	1.1%	1.5%	0.4%	3.6%	-	
20X5	200	0.5%	1.3%	1.7%	0.5%	4.0%	-	
20X6	260	0.7%	1.5%	1.8%	0.6%	4.6%	0.6%	1.6
20X7	280	0.8%	1.4%	1.9%	0.7%	4.8%	2.6%	7.3
20X8	300	0.7%	1.5%	2.0%	0.8%	5.0%	4.3%	12.9
20X9	310	0.7%	1.6%	2.0%	0.8%	5.1%	5.1%	15.8
								37.6

Current Expected Credit Loss (CECL):
Planning and Moving Forward

In this illustration, the bank arrives at an estimate of USD 37.6 MM as the allowance for credit losses on its auto loans as of December 31, 20X9.

Expected loss modeling

Expected loss modeling methodology measures CECL by estimation of three components:

1. Probability of default (PD)
2. Loss given default (LGD)
3. Exposure at default (EAD)

Expected losses = PD x LGD x EAD

For implementing this approach, the financial institution should define a standard default or charge-off definition over the life of loan.

CECL Measurement Using Expected Loss Modeling					
Loan Account Number	Loan Balance (EAD)	Loan Type	PD	LGD	CECL (PD x LGD x EAD)
10XXXX1	100,000	Home loan	0.75%	12.5%	94
10XXXX2	110,000	Home loan	0.50%	10.0%	55
10XXXX3	90,000	Home loan	0.75%	15.0%	101
10XXXX4	95,000	Home loan	0.25%	5.0%	12
10XXXX5	85,000	Home loan	1.20%	20.0%	204
10XXXX6	95,000	Home loan	0.50%	8.5%	40
10XXXX7	105,000	Home loan	0.65%	11.0%	75
10XXXX8	110,000	Home loan	0.45%	9.0%	45

Illustration: Consider a bank providing 30-year home loans, with an average prepayment history of 7 years. The bank may want to define the performance window as 7 years for modeling charge-off behavior of its customers.

Such models are based on numerous explanatory variables like consumer credit scores, risk rating, payment history, delinquent behavior, loan-to-value ratio etc. Further, adjustments are made by considering predictors with current and forecasted values of macroeconomic indicators (for example, House Price Index, GDP, and unemployment rates) and the industry trends specific to loan type (for example, real asset values and house rentals).

Expected loss modeling demands large amount of data and is generally adopted by large financial institutions that have required staff and infrastructure for

following streamlined processes of data collection, storage and maintenance. As this methodology allows loan level granularity for estimating CECL using regression analysis, it typically yields high degree of accuracy.

Discounted cash flow approach

Discounted cash flow analysis is based on the present value of expected future cash flows discounted at the financial asset's effective interest rate. Under this approach, CECL estimate explicitly reflects the time value of money.

> Projected cash flows are based on the financial institution's best estimate of reasonable and supportable forecasts

> The allowance for credit losses is calculated as the difference between

the amortized cost basis and the present value of projected future principal and interest cash flows

Illustration: Consider a bank providing USD 1 MM amortizing loan with 5% coupon rate for 5-year contract term.

> Assuming no cost, deferred fee, premium or discount, the effective interest rate equals the coupon rate of 5%

> Equal installment of annual payment works out to be USD 230,975 based on net present value method such that closing balance at the end of 5-year contractual term is zero

> Based on historical loss experience on loans of similar risk characteristics and supportable forecasts, bank anticipates consumer to default by 10% and 15% on annual payment in Year 4 and Year 5 respectively

CECL Measurement Using Discounted Cash Flow Approach								
Period	Opening Balance	Annual Payment	Interest	Principal	Closing Balance	Expected Default	Expected Cash Flow	PV of Expected Cash Flow
[A]	[B]	[C]	[D] = 5% of [B]	[E] = [C]-[D]	[F] = [B]-[E]	[G]	[H] = [C]-[G]	
Year 1	$1,000,000	$230,975	$50,000	$180,975	$819,025	$0	$230,975	$219,976
Year 2	$819,025	$230,975	$40,951	$190,024	$629,002	$0	$230,975	$209,501
Year 3	$629,002	$230,975	$31,450	$199,525	$429,477	$0	$230,975	$199,525
Year 4	$429,477	$230,975	$21,474	$209,501	$219,976	$23,097	$207,877	$171,021
Year 5	$219,976	$230,975	$10,999	$219,976	$0	$34,646	$196,329	$153,829
		$1,154,874	$154,874	$1,000,000		$57,744	$1,097,130	$953,851

Current Expected Credit Loss (CECL):
Planning and Moving Forward

Expected default amount is based on bank's assessment of past events, current conditions and reasonable projections. Under Discounted Cash Flow approach, bank needs to make credit loss reserve of US 46,149, calculated as the difference between the opening balance of Year 1 and the sum of present value of expected cash flow over life of the loan (the next five years).

Roll-rate method

The roll rate method (also referred to as 'Migration Analysis' or 'Transition Matrix Approach' or 'Flow Analysis') is based on the prediction of movement of percentage of assets of similar risk characteristics to a more severe risk rating. Under CECL model, financial institutions are required to make adjustments to historical roll rates for

differences in current and future conditions before using them for arriving at estimation of expected credit losses.

Illustration: Consider a manufacturing firm selling products to retail stores with an opening credit balance of USD 1 MM with its customers of similar risk characteristics. If payment is not made within 90 days, the outstanding balance is charged-off.

> Manufacturing firm analyzes historical dollar roll rates from current to 30 DPD,

from 30 DPD to 60 DPD and so forth

> In the anticipation of increasing unemployment rate and lower demand for its products, the firm accounts for 10 percent increase in loss rate in each delinquency bucket

In this simplified illustration, CECL estimate works out to be USD 6,000 (calculated as the difference between opening credit balance and total expected payment amount) for underlying credit instance across all customers of similar risk rating.

CECL Measurement Using Roll Rate Method

Period	Past Due Status	Historical Dollar Roll Rates with Adjustments				Opening Credit Balance	Expected Payment
		1-30 DPD	31-60 DPD	61-90 DPD	Charge-off		
Month 0	Current	5%				$1,000,000	$950,000
Month 1	1-30 DPD		30%			$50,000	$35,000
Month 2	31-60 DPD			50%		$15,000	$7,500
Month 3	61-90 DPD				80%	$7,500	$1,500
							$994,000

Current Expected Credit Loss (CECL):
Planning and Moving Forward

Roll rate analysis has high dependence on extensive volume of bucket migration data. It is not popular for calculation of credit losses among financial institutions. However, if the required data is available, this approach can provide highly accurate estimates for loss provisioning.

Subject to data availability and complexity of the institution, more sophisticated methodologies can be applied. For instance, transition matrix models can be developed using Markov chain or regression analysis to calculate transition probabilities between different risk ratings. Nevertheless, it is imperative to validate roll rate models across various economic cycles and seasons along with adjustments for current and expected economic conditions through quantitative and qualitative factors.

Constraints and solutions

The CECL standard brings radical changes that are bound to affect entities of all sizes, large or small. The impact, however, is expected to vary by size of the entity due to following nuances:

> **Data availability:** As a standard practice, large banks make significant investments in data storage platforms. Additionally, to run various operations at a large scale, it is imperative for them to maintain

reliable data for a sufficiently long history. Smaller banks, on the other hand, do not necessarily retain granular information for loans and credit and may not even store enough historical data. For implementation of the new standard, such entities are likely to resort to data imputation and approximation, impacting accuracy of CECL estimates. It is highly recommended that banks start collecting and storing financial asset level data as early as possible.

Constraints:

Large and small entities require different solutions to comply with new accounting standard as they have different constraints and challenges.

Data availability
> Level of granularity
> Length of history

Team of experts
> In-house team
> Consultants

Methodology
> Complexity of approach
> Agency expectations

Aa

Current Expected Credit Loss (CECL):
Planning and Moving Forward

> **Methodology:** As FASB has not specified any particular method for calculating expected credit losses, different banks will take liberty to develop the models that best suits their needs. While large banks are expected to go with sophisticated loan level models, the small banks with low complexity may use simpler approaches at portfolio or segment level for estimating lifetime credit losses.

> **Team of experts:** With changing regulations in banking industry, demand for subject matter experts increases. Large entities reap the benefits of economies of scale and typically manage additional sources of fund to develop an internal team of experts or seek professional services of consultants. However, smaller entities with limited budget are likely to face more challenges on this front.

In the light of above constraints, CECL solution is expected to vary with bank's size. While the large and medium banks may draw benefits from existing models through customizations, it will be cost effective for smaller banks to go with industry solutions.

Customized solution for large and medium size banks

Banking organizations with total consolidated assets of more than $10 billion are required to comply with stress-testing practices. Large banks have been carrying out Comprehensive Capital Analysis and Review (CCAR) and Dodd-Frank Act stress testing (DFAST) exercises since 2012. Such models forecast losses for 9 to13 quarters based on conditional view of macroeconomic variables and account level

characteristics. As these models have gone through rigorous scrutiny from regulators, they have been refined to a great extent over last few years.

Most of the large entities should be able to leverage their existing models as a starting point. However, they would require careful customizations to incorporate adjustments for historical information and reasonable and supportable forecasts of expected losses for entire life of loan. Such banks have options to expand their staff or seek help from industry experts.

The team of experts at EXL Analytics has been providing analytics and consulting services for regulatory requirements to leading banking partners for past several years.

Current Expected Credit Loss (CECL):
Planning and Moving Forward

Industry solution for smaller banks and credit unions

Right after the introduction of CECL accounting standard by FASB, the Board of Governors of the Federal Reserve System (FRB), the Federal Deposit Insurance Corporation (FDIC), the National Credit Union Administration (NCUA), and the Office of the Comptroller of the Currency (OCC) issued a joint statement to provide their viewpoint. These agencies do not expect smaller entities to implement sophisticated modeling techniques. However, the forecasts should be supportable by drawing consistency in assumptions used in their other business operations.

Small banks can opt for plug-and-play vendor solutions. For accurate measurement of losses, they should strive for complying with following three

necessary features related to data and flexibility:

> **Industry data usage:** Individual small scale entities may not have sufficient data points for building a customized solution for predicting expected losses at the most granular level. A robust solution should be developed based on industry and bureau data.

> **Segmentation:** The solution should allow banks analyze losses at various segment levels. Flexible segmentation views by vintage, product and risk score classes would help identifying unexpected trends and refining estimates for fostering accuracy.

> **Configurable assumptions:** Banks should be able to configure few parameters (such as historical adjustments, macroeconomic

scenarios and impact of expected strategy changes) to have some control on loss estimation for reflecting internal factors.

How entities can set up a CECL program

The move from incurred loss to CECL is an intensive exercise with respect to time and resources. It will require close coordination across broad areas within an organization to meticulously develop a CECL program. The tasks needed to successfully implement a CECL program generally fall into one of three implementation phases: Plan, Build and Run. A few tasks, such as documentation and general project management, will run throughout the entire program. Given the implementation timeline of Dec 2019 for SEC filers and Dec 2020 for others, entities should already start moving

Current Expected Credit Loss (CECL):
Planning and Moving Forward

on their CECL program. Though large and small entities will have to go for different solutions based on their specific constraints and challenges, both of them can move towards CECL implementation in this phased manner.
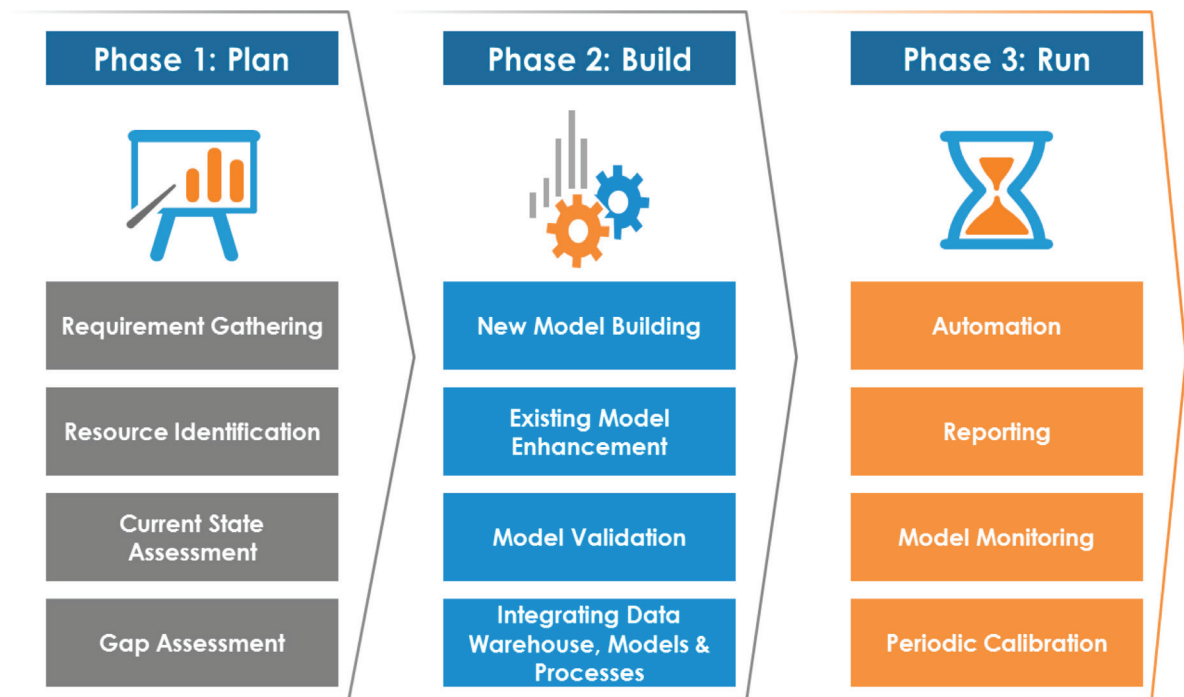
Phase 1: Plan

The objective of the Planning phase is to gather **business and functional requirements** for the CECL program and to establish a detailed plan for the various portfolios in scope for CECL implantation. In order to start on this, a thorough understanding of the CECL standard and the differences between CECL standard and the existing GAAP is essential. Entities affected by CECL will need to assess their current state, analyze operational and data gaps and create a roadmap towards

implementing CECL program. The plan should be developed from a long-term perspective by redesigning the operational processes supporting the ongoing monitoring and reporting and standardizing these changes in procedural documents. These tasks will require **additional resources across various functions**

– finance, accounting, IT, information management, and others. As such, entities will need a formal CECL implementation team to orchestrate these joint efforts.

For the portfolios that are in scope, modeling, data and systems requirement should be gathered as per CECL standard

Phase 1: Plan	Phase 2: Build	Phase 3: Run
Requirement Gathering	New Model Building	Automation
Resource Identification	Existing Model Enhancement	Reporting
Current State Assessment	Model Validation	Model Monitoring
Gap Assessment	Integrating Data Warehouse, Models & Processes	Periodic Calibration

and a complete and comprehensive **understanding of the current state** should be developed which should include, but is not limited to:

> Understanding the current operational processes for credit provisioning that include data and models being used, workflows across different functions, timelines, etc.

> Identifying data and systems that are available, but are not being used for the purpose of credit provisioning

> Identifying the procedural documents that may be affected and their owners

Based on the current state assessment and initial gap analysis, the project team should further assess the **sources of these gaps**, which could be further broken down to data unavailability, procedural disconnect, lack of suitable models, and additional resource needs. Project team should also assess the amount of efforts that need to put through and assign relevant owners to each of the areas identified.

Every entity will have different operational concerns, data warehouses, model libraries etc. and thus different set of challenges – the CECL plan needs to account for that. Many entities that are already Basel compliant can leverage Basel's credit risk management models and make proper **adjustments to data and models** they currently use to meet the CECL requirements. Similarly, other larger entities may be able to adapt their CCAR and DFAST models for the CECL process. The planning phase is the ideal time to make these assessments. Some entities may have to establish **new models and**

identify sources of data from scratch. In all scenarios, entities will need to clearly document the processes and the rationale that support their decision-making in a way that is compliant with the CECL standards for reporting.

Phase 2: Build

After planning, entities need to **build and test the models** in accordance with the requirements and technical designs created in the plan phase. In broad terms, the build phase may include model variable selection, final functional form determination, and estimation or calibration. In this phase, the critical component is execution – a well-developed plan from the planning phase will allow modelers to develop, enhance and adjust models quickly and efficiently. These models

should then be rigorously tested to ensure that requirements are met and that model performance is satisfactory.

During the build phase, the implementation team should also validate the design of the process for the production CECL models, from data preparation, to running the model, to the creation of finalized reports or other output. Comprehensive test runs of the entire CECL model suite, ahead of the stated effective date, will ensure full and timely compliance with the CECL standard. Entities also need to update their procedural documents based on the ongoing feedback from relevant stakeholders to further streamline the reporting processes. Entities that need to comply with Basel, CCAR, DFAST and IFRS 9 also need to consider building **integrated data warehouses, models and**

processes that support financial, regulatory and internal risk management reporting. This integration will provide long term cost cutting opportunities for entities if well planned and executed.

Phase 3: Run

In the Run phase, entities move towards their steady state for CECL production. Implementation teams will integrate their validated models into a production environment. Here, the focus will be on **automating the end-to-end CECL reporting process**. This move to production entails close work and coordination between the modeling and IT teams to ensure that regular model runs are completed with minimal effort. This process in itself can be quite lengthy, as it often requires substantial knowledge transfer across

teams and the porting of entire modeling environments across systems. Again, thorough documentation and effective communication will be critical factors for success.

Further, the Run phase involves the **monitoring of the CECL models and data**. Periodic testing will be necessary to ensure the validity of model parameters. Upstream changes in database structure and content will need to be reported and adjusted for. Updates from the FASB or IASB standards, or changes in the interpretation from auditors will require modeling teams to update their models.

Finally, the implementation team will also need to allow for periodic testing, validation and calibration of the models. As more data are recorded and stored, the models can

Current Expected Credit Loss (CECL):
Planning and Moving Forward

achieve a greater level of accuracy. New economic conditions that might not have been present in the model development data might cause significant changes to model parameters, models will need to be adjusted accordingly, and the adjustments will need to be documented.

Ongoing tasks

A running theme throughout all phases of the CECL implementation project is documentation. Implementation teams will need to maintain and update documentation throughout the CECL implementation process, and into the steady state. High-quality documentation will prevent conflict with auditors and facilitate clear communication across the different functional teams.

Implementation teams will also need to perform the usual project management tasks – task tracking, defect and enhancement logs, running meetings, coordinating tasks, etc. – throughout the life of the project. There are countless philosophical approaches to project management, and sub-teams may each have their own approach, based on the nature of their tasks.

Conclusion

CECL represents a clear shift in accounting practices and priorities. Moving from the backward-looking incurred loss model to the forward-looking expected loss model allows entities the ability to recognize and report their anticipated losses, adjust reserves in anticipation of future losses and provide greater transparency to shareholders, auditors and other key stakeholders.

Movement towards CECL is a complex undertaking, requiring a clear understanding of the changes and close collaboration across an entity's entire organization. Accountants, economists and modelers will need to develop new and improved econometric models. Information

Current Expected Credit Loss (CECL):
Planning and Moving Forward

technology and data support teams will need to work closely with other business areas to address new requirements for data systems and management. Legal and auditing teams will need to understand and communicate as per new disclosure requirements.

As different entities have different constraints and challenges, they will have to take different approaches towards CECL implementation. We suggest customized solution for large and medium entities which will leverage their existing data assets and model libraries. Smaller entities, on the other hand, can opt for plug-and-play

vendor solutions. In either case, setting up a CECL program is an intensive exercise and should be taken up at the earliest given the implementation timelines.

We suggest a phased approach for CECL implementation for all entities. In the first phase, entities should develop a clear understanding of the CECL requirements, establish a dedicated CECL implementation team and develop requirements for models, systems, data, and other operational areas. In the next phase, entities should build and evaluate the models and systems

outlined in the first phase. In the final phase, entities move models and systems into a production environment, including any automation needed to produce the required reports and other disclosures. Throughout the process, the CECL team will need to produce and maintain documentation to record the decision-making process. By following this phased approach, entities will be able to ascertain their readiness for CECL.

Current Expected Credit Loss (CECL):
Planning and Moving Forward

Most US-based entities will be required to provision for credit loss based on FASB's CECL. However, entities with dual filing requirements may need to provision as per IASB's IFRS 9 too. Such entities should develop their plan keeping in mind both the similarities and the differences between FASB's and IASB's requirements.

The key similarities between IASB and FASB standards are:

> Both were designed with the goal of providing financial statement users with more relevant information by reflecting the current credit risk using expected credit loss approach for financial instruments that are not accounted for at fair value.

> Both approaches are forward-looking, using the most recently available data on economic conditions and portfolio credit risk to anticipate credit loss, as opposed to reporting only the losses that have been incurred.

> Both standards also require that measurements be reasonable and supportable, based on historical, current and forecasted information. The estimation of effects from possible future credit loss events must be taken into account.

The key differences between these standards are:

Loss recognition time frame

> FASB requires CECL estimations for full lifetime of credit losses. Reporting the time value of money is only explicitly required when a discounted cash flow approach is used for estimation.

> IASB requires a three-stage approach

Stage	Estimation Requirements
1. Assets where credit risk is low/not significantly changed since initial recognition	Estimate expected loss over 12 months
2. Assets where credit risk has increased significantly since initial recognition credit losses. Interest income based on EIR x Gross Carrying Amount	Estimate expected loss for full lifetime
3. Asset has both increased risk and observable evidence of impairment credit losses. Interest income based on EIR x Net Carrying Amount	Estimate expected loss for full lifetime

Current Expected Credit Loss (CECL):
Planning and Moving Forward

Addendum: Quick look at CECL vs IFRS 9 *(continued)*

Lifetime of cancellable credit facilities

> Under FASB, if an entity has the ability to unconditionally cancel the unfunded portion of a loan commitment, the entity is not required to estimate expected credit losses on that portion, even if the entity has historically never exercised its cancellation right.

> Under IASB, entities are required to measure CECL over the period for which they are exposed to credit risk.

Modifications of financial assets

> Under FASB, a concession provided to a troubled borrower is treated as a continuation of the original lending agreement.

> Under IASB, troubled debt restructurings (TDRs) do not exist.

Non-accrual practices

> Under FASB, application on non-accrual practices is permitted.

> Under IASB, application on non-accrual practices is not permitted

EXL (NASDAQ: EXLS) is a leading operations management and analytics company that designs and enables agile, customer-centric operating models to help clients improve their revenue growth and profitability. Our delivery model provides market-leading business outcomes using EXL's proprietary Business *EXL*erator Framework®, cutting-edge analytics, digital transformation and domain expertise. At EXL, we look deeper to help companies improve global operations, enhance data-driven insights, increase customer satisfaction, and manage risk and compliance. EXL serves the insurance, healthcare, banking and financial services, utilities, travel, transportation and logistics industries. Headquartered in New York, New York, EXL has more than 26,000 professionals in locations throughout the United States, Europe, Asia (primarily India and Philippines), South America, Australia and South Africa.

Email us: lookdeeper@exlservice.com   **On the web:**   EXLservice.com

GLOBAL HEADQUARTERS
280 Park Avenue, 38th Floor, New York, NY 10017
T: +1.212.277.7100   •   F: +1.212.277.7111

United States   •   United Kingdom   •   Czech Republic   •   Romania   •   Bulgaria   •   India   •   Philippines   •   Colombia   •   South Africa