TALES FROM THE FRONTLINE OF CECL IMPLEMENTATION - PART 2

LEARNING LESSONS FROM CECL IMPLEMENTATIONS

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CECL COUNTDOWN SERIES

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INTRODUCTION

More Lessons from the CECL front line

In the last e-book, we collected the first set of articles based on our experiences of implementing CECL at smaller banks and credit unions. This e-book continues in that vein, with a greater focus on implementation choices made as part of those projects.

Topics found within these articles include deep dives on Expected Credit Loss (ECL) methodologies, along with their pros and cons, as well as more specific details that can, make implementations run smoothly or derail them, if missing.

CECL is the main challenge facing the community banking and credit union sectors today. Assumptions about it being a straightforward replacement of Allowance for Loan and Lease Losses (ALLL) are misplaced and can lead to teams, charged with making the switch, with too little time to think through, design and build a CECL program that works for the institution rather than against it.

We hope that the articles herein can help in de-complexifying these projects and the key choices facing the implementation teams. Further details, insights, and curated resources can be found at CECLExpress.com.

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Chapter 10

DATA AND ISSUES AROUND CREATING A SMOOTH, AUDITABLE PROCESS IN THE FUTURE

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AUDITING CECL RESERVE CALCULATIONS

The Financial Accounting Standards Board's (FASB) new standard, the Current Expected Credit Loss (CECL) continues to be a challenge for independent auditors, financial statement preparers, and users. The metrics that companies traditionally used to estimate their future credit losses have undergone a paradigm shift with CECL. The previous method of loan loss estimation, using historical credit performance, has been replaced by CECL, which directs organizations to recognize an estimated loss provision during the loan's lifetime, from the day of its origination.

The 2008 financial crisis highlighted the difficulty of financial institutions in estimating their actual expected credit loss provisions. This made investors lose confidence in the adequacy of Allowance for Loan and Lease Losses (ALLL) reserve balances reflected in the financial statements of those financial institutions.

Many lending products' profitability will be negatively affected by CECL calculations. Significant challenges are also anticipated in auditing post-CECL reserve calculations, including getting assurance that overly subjective measures are not being used by management to manipulate earnings. The CECL standard does not explicitly direct institutions on how to factor in forward-looking information while determining their lifetime credit loss estimates. This allows diversity in how institutions choose to estimate credit losses.

A thorough CECL audit framework ensures that management at financial institutions is prepared to justify the data, assumptions, models, and adjustments used, as well as enforce requisite governance and controls.

Source: BKD CPAs & Advisord

Changes to CECL audit practices

Auditors can anticipate seeing a wide array of practices across institutions since CECL is a principles-based accounting standard. It is critical for auditors to interact frequently with organizations that are still adopting CECL. This will provide them with plenty of time to learn about management's post-implementation processes and procedures. While implementation operations are ongoing, this approach can also ensure that the management has time to make necessary adjustments.

Economic conditions from the past are frequently poor predictors of future economic downturns. Forward-looking estimates are flawed and can be too late in reflecting signs economic downturns, necessitating the management's judgment-based modifications in ECL estimation processes. As a result, auditors

will have the difficult task of determining whether the management's depiction of financial statements is materially true. Since the management will be required to calibrate their models, they will need the liberty to make changes to their post-implementation ECL estimation models and techniques.

CECL is a complex requirement that needs a much broader set of assumptions and data that leads to more controls and documentation. All this preparation and anticipation will equip management at financial institutions to squarely tackle the audit and regulatory challenges. There are five principal areas that financial statement preparers need to focus on to defend their estimates while undergoing an audit. These areas are explained below.

Five main areas of focus for audit scrutiny:

- **Data**

  Data preparers for a CECL audit must be accountable for all data used in the estimate and must create and implement an internal control mechanism to ensure that the data is comprehensive and accurate. Data that supports upstream processes must be well sourced and evaluated. To support an adequate assessment of the impact that each data factor has on the estimate, it is necessary to create an inventory of data elements. When employing external data, preparers are supposed to analyze to verify the data's relevance and dependability.

- **The usage of models**

  The management must focus on conceptual soundness, data and assumptions, calculations, and outcome analysis, just as auditors do. To ensure optimal model use, more advanced models necessitate proportionate managerial skills. Model validation is an important governance control for both initial adoption and ongoing model use. To use models efficiently, managers must understand and analyze historical model accuracy as well as model behaviors or patterns.

- **Qualitative adjustments**

  The goal of qualitative adjustments is to resolve the quantitative approach's flaws and limitations, as well as to assure that the CECL estimate as a whole meets the accounting and regulatory guidance standards. Assessing the qualitative adjustment requires sound logic and analysis of relevant facts. Management should create a risk inventory to assess whether a qualitative adjustment is required. A framework that is well-documented should establish a systematic and transparent approach for determining qualitative modifications.

- **Assumptions**

  The management should also build an inventory of assumptions in order to recognize all assumptions. Auditors must be able to comprehend how management has determined the value of an assumption and why a particular one was chosen. Benchmarks should be assessed for relevance and consistency, as well as any discrepancies between benchmark numbers and internal data. Materiality is an important assumption in developing a CECL estimate, and the management's records should show how materiality was taken into account. As new risks emerge, changes to the process may become essential.

- **Controls/Governance**

  The control environment relies heavily on good documentation. Given the extra complexity and judgment required to produce a CECL assessment, a solid structure of governance is essential.

CECL is a more complicated requirement than prior standards, as it is based on a considerably broader range of data and assumptions, requiring more documentation and controls both during and after implementation. This article has outlined some of the major issues from the perspective of an auditor to assist preparers in better positioning themselves to substantiate their estimates when audited.

Chapter 11

Q-FACTORS – THE SECRET SAUCE FOR EVERY US INSTITUTION

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Q FACTORS UNDER CECL

Most financial institutions in the U.S. were left wondering about the fate of their qualitative factors, also known as Q factors, under the Current Expected Credit Losses (CECL) standard when it was issued by the Financial Accounting Standards Board (FASB) in 2016.

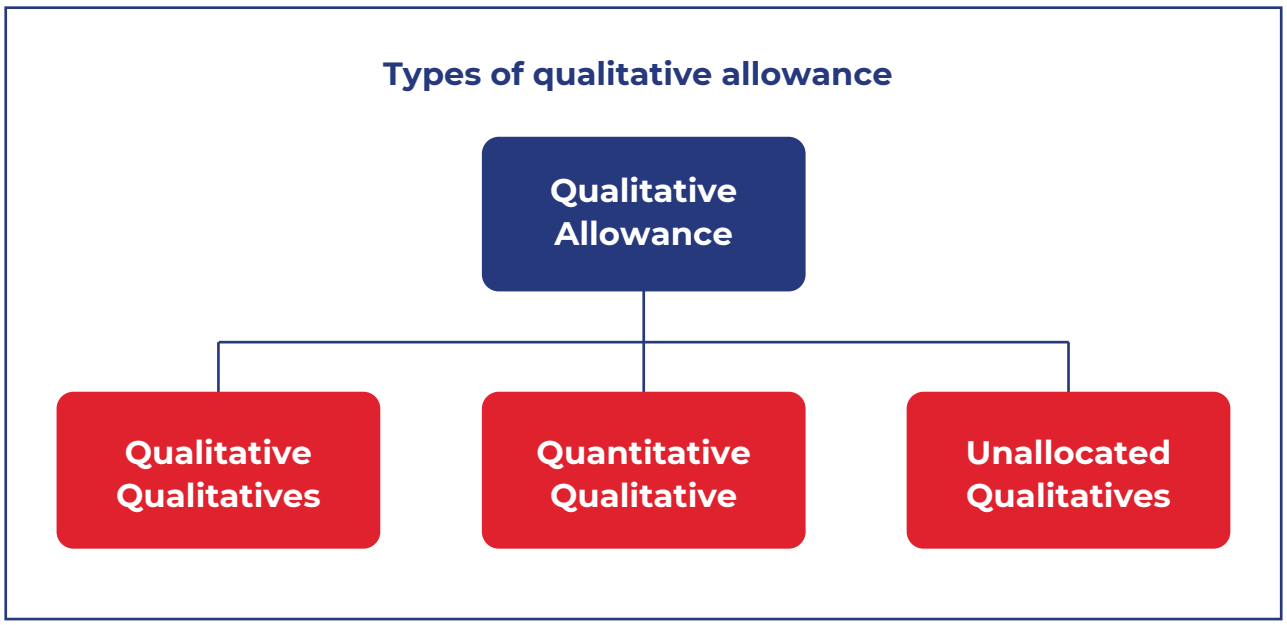
Bankers, faced with a 2023 CECL implementation date, wonder how best they will implement their existing Q factors to keep their allowance for credit losses figures at manageable levels. Banks and credit unions are also struggling to understand the percentage of quantitative to qualitative factors needed for their CECL calculations. The economic uncertainty caused by COVID-19 has further pushed qualitative aspects of the allowance process to the forefront of allowance estimates. A framework is now required for integrating both qualitative and quantitative dimensions into the standard Q-factors.

To meet the mandates of auditors, regulators, senior management, and investors, all qualitative allowance considerations must follow a complete, methodical, well-documented, and consistently applied approach. Most allowance models need to be supplemented with a qualitative allowance component if they are to be accurate. When compared to incurred loss models, the qualitative allowance for most institutions is likely to increase under CECL.

Qualitative allowance and its types

There are three types of qualitative allowances based on how the important data is compiled and consumed. They are:

- Qualitative qualitatives
- Unallocated qualitatives
- Quantitative qualitatives



1. The qualitative qualitatives are that part of the qualitative allowance, which is made up of data that are subjective in nature. Given its subjective nature, auditors and regulators require a well-defined, supportable, transparent, and consistent approach.
2. The quantitative qualitative allowance is that component of qualitative allowance made up of objective data pieces that can be gathered and tracked openly.

3. Additional management adjustments to the allowance that are not linked to certain segments or models and do not belong within the framework of quantitative or qualitative qualitatives are covered by unallocated qualitatives.

Qualitative allowance application and its tiers

In some areas of the portfolio, qualitative allowance may be used more liberally than in others. We can segregate these areas into three tiers.

Tier 1:

- Off-balance sheet allowance
- New products
- Bank loans that were recently acquired, including purchased credit deteriorated that have a little history prior to acquisition
- Models that rely on data from the industry
- Portfolios that are extremely sensitive to model inputs

Tier 2:

- Loans that are originated and collectively reviewed
- Immaterial portfolios
- Portfolios that are seasoned and well-understood

Tier 3:

- Individually reviewed loans

Source: Wolters Kluwer

Integration of qualitative factors into CECL quantitative models

Several qualitative factors will figure more prominently under CECL. These Q factors are:

- Changes in nature of the portfolio
- Changes in lending policies and procedures
- Changes in the value of underlying collateral for loans that are collateral-dependent
- Changes in quality of assets
- Changes in regional, international, national, and local economic and business conditions

Other Q factors are likely to remain unaltered from the existing incurred loss model. This is because it is difficult to incorporate them into specific quantitative model assumptions on a consistent basis. Both qualitative and quantitative criteria can be utilized to determine the appropriate degree of supplemental qualitative allowance to be added or deducted from the allowance model output for most of the nine Q-factors.

Macroeconomic forecasts play a crucial role in CECL projection models over the expected lifetime of a portfolio. To cover management's evaluation of each of the qualitative components, appropriate documentation is required.

Management can use qualitative allowance to supplement allowance model outputs based on their best judgment of overall economic or credit conditions throughout the forecast horizon. It is an best practice to extract the quantitative parts of any Q-factor and utilize them as a starting point in establishing any qualitative rating. To convert Q-factor ratings to genuine qualitative allowances, a rating scale is required. Documentation remains the most relevant aspect of the qualitative process for regulators, management, and auditors.

Chapter 12

PROBABILITY OF DEFAULT – POOL VS CREDIT SCORE

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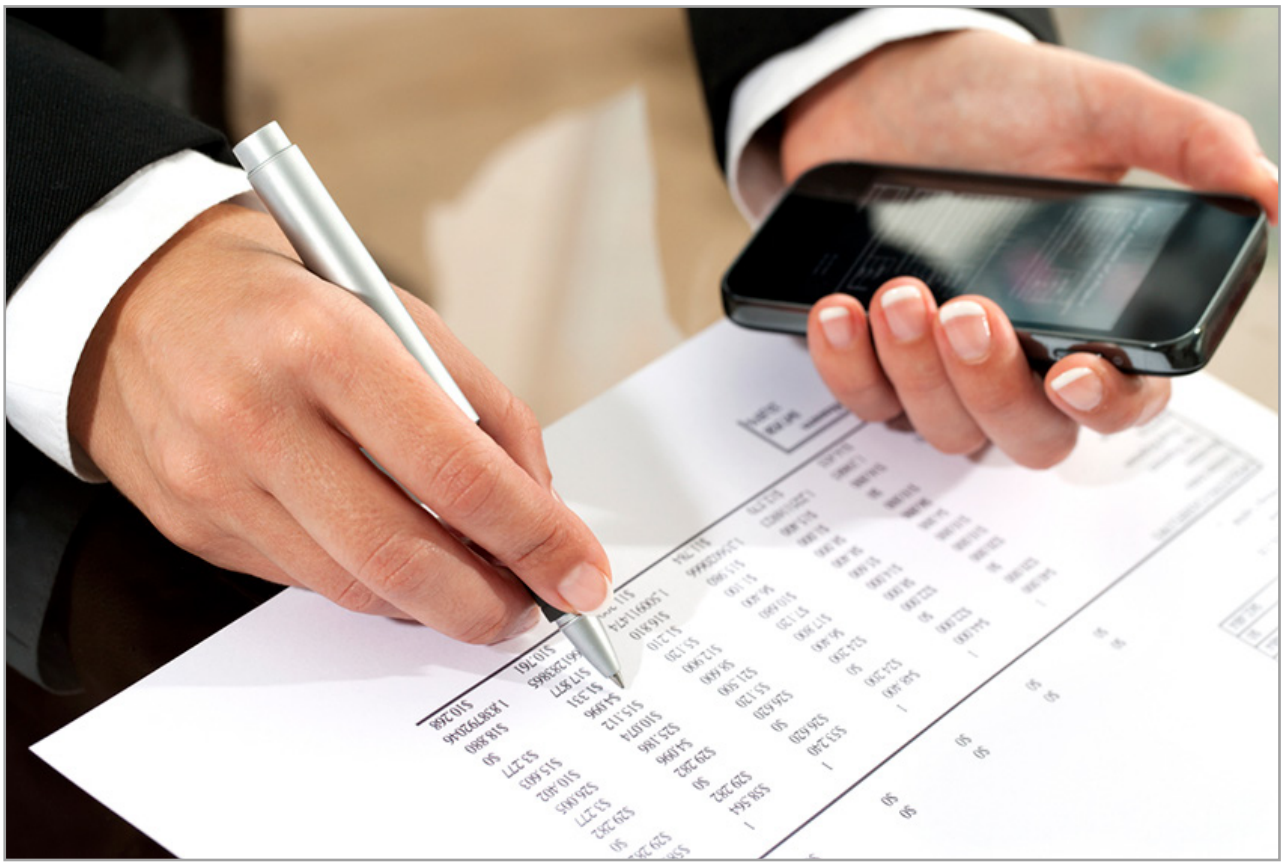
PROBABILITY OF DEFAULT (PD) UNDER CECL

Most financial institutions, such as banks and credit unions, regard the Probability of Default/Loss Given Default (PD/LGD) technique as a reliable method for determining suitable reserve levels in an institution's loan and lease loss allowance. The PD/LGD method has quickly become the preferred one in the Financial Accounting Standards Board's (FASB) Current Expected Credit Losses (CECL) guidance. While the method is straightforward, the amount of data needed to derive input values may be daunting. The effectiveness of the estimate is what makes PD/LGD so appealing to organizations looking to improve their risk management process. To ensure that the inputs for this calculation are an accurate reflection of loss in an institution, there needs to be a consistent approach in the collection of loan-level data used for the PD/LGD method.



Quantification of credit risk and the FICO score

The quantification of credit risk is an important concept in modern finance, which involves the process of assigning comparable and measurable numbers to the possibility of default risk. Credit risk is influenced by a variety of factors, ranging from borrower-specific criteria to market-wide issues. Liabilities can now be evaluated and projected to safeguard the lender from financial loss.

Variables that influence credit risk evaluation:

- The severity of the outcome of a default for both the borrower and the lender

- Borrower's financial health
- Size of the credit extension
- Macroeconomic considerations such as interest rates and economic growth
- Default rate trends

The FICO Score

The analytics software company, Fair Isaac Corporation (FICO), has created a credit score known as the FICO score. Institutions such as banks decide whether to issue a credit by assessing credit risk based on a borrower's FICO Scores. These scores determine the creditworthiness of borrowers by taking into account data in five areas that are mentioned below:

- New credit accounts
- Payment history
- The types of credit that were used
- The degree of indebtedness
- Duration of credit history

FICO Scores range from 300 to 850. Credit histories with scores between 670 to 739 are considered good. More than 90 percent of the credit decisions made in the U.S. are based on FICO Scores. Many lenders approve credit only when a certain FICO minimum threshold is reached. This is true, especially in the mortgage industry. To achieve a high FICO Score, borrowers should maintain a good payment history and keep credit card balances within the allowed limits.

Credit scores and the PD/LGD method

All the variables discussed above and credit scores such as the FICO Score are used as data in the PD/LGD method while estimating CECL allowances. Each and every loan pool is run through the PD/LGD calculations to understand credit losses. These calculations give banks an idea of the kind of reserves they need to build to cover all potential credit losses. To understand the CECL method, we need to be familiar with only three of its main inputs to estimate lifetime losses. The challenge, however, is calculating these inputs. These three variables are explained below.

1) **Probability of Default (PD)**

   The probability that the borrower will be unable to make scheduled debt payments is expressed by PD. Individual borrowers' default risk is most accurately represented by a combination of two factors:

   - Credit score
   - Debt-to-income ratio

   The PD for businesses is estimated by credit rating agencies. By committing collateral against a loan, borrowers can share the risk of default. A higher PD translates to higher down payments and higher interest rates on a loan.

2) **Loss Given Default (LGD)**

   There is no standard method when it comes to calculating LGD. Most lenders review an entire pool of loans and judge the total exposure to loss while calculating LGD, and do not just calculate LGD for each loan separately. The institution must calculate the estimated loss rate if a loan is defaulted using past data on defaulted loans. For current and/or expected changes, the institution may adjust the loss given default rate.

3) **Exposure at Default (EAD)**

   When a loan defaults, institutions must estimate the principal balance of the loan at that point. Though EAD is more relevant to financial institutions, it remains an important concept for any individual or entity.

After estimating the above variables through some analysis of historical information, the expected lifetime loss can simply be obtained by multiplying them together.

Advantages of the PD/LGD method

- It is more accurate than other methods because it takes into account more quantitative information.
- In this method, qualitative factors can be considered directly rather than adding them to the quantitative part later as is common in other methodologies.
- The lower reliance on subjective factors leads to a smaller CECL allowance for credit losses in the PD/LGD method.
- It is simpler to tie the loan rate to the credit score and, consequently, to the CECL assessment. A higher FICO score translates to a lower loan rate and a smaller CECL estimate and allowance for institutions. This ease of use makes PD/LGD a preferred method among auditors and regulators alike.

Disadvantages of the PD/LGD method

- The precision of this method requires more data in order to calculate the three inputs to the model.
- Economic factors will need to be adjusted for current and forecasted changes due to their effects on the variables.
- Specialized software will be needed for all the extra calculations and statistical analysis required by the method. Such investments are not possible for small banks and institutions.
- Individuals can manipulate their spending and repayment habits in the short term to raise their credit scores. This in turn could influence CECL calculations through the PD/LGD method.

Chapter 13

THE RELATIONSHIP BETWEEN DCF, PD/LGD AND LOAN PRICING

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DISCOUNTED CASH FLOW (DCF) METHOD AND ITS RELEVANCE TO CECL

Notwithstanding the 2023 effective date, financial institutions are already working to have systems and procedures in place to implement the Current Expected Credit Losses (CECL) standard. Developing a technique for calculating the allowance for expected credit losses is one of the most important aspects of adhering to CECL. Financial institutions can choose from a variety of methods, some of which are better suited to specific products than others. Methods range from the Weighted-Average Remaining Maturity (WARM) method, which is preferred by smaller institutions, to more complicated ones, like the Discounted Cash Flow (DCF) method. The number of resources and data available to an institution will most likely determine which method the management chooses while calculating their CECL allowance. While the DCF method is widely regarded as complex and data-intensive, it is still considered by many institutions to be best suited for estimating their credit loss allowance.

How do contractual cash flows compare to discounted cash flows?

DCF is the most comprehensive of the CECL methods, and it is typically utilized by larger organizations that require more information and control. Before we explore DCF, it would help to understand the similarities and differences between discounted cash flows and contractual cash flows. An institution's core system contains data for factors such as:

- Payment type
- Interest rate
- Payment amount
- Payment frequency
- Maturity date
- Amortization

These factors typically come together to give us contractual cash flows. The cash flows for a loan can be projected using this data. Contractual cash flows can be converted to expected cash flows by making a few assumptions, which have been explained below.

Prepayment rate

The annual proportion of a loan's outstanding balance projected to be paid off early is known as the prepayment rate. Prepayment can be of several different types, such as refinance, partial, or full. The effective duration of a loan reduces as the prepayment rate and, consequently, prepayments increase. This means less interest for the lender and is considered a prepayment risk. This can impact the timing of cash flows and also an institution's CECL estimate.

Probability of Default (PD)

The chance that a borrower is going to default is the probability of default. It is expressed as an annual percentage and is adjusted on a period-by-period basis. The credit quality of the borrower determines this metric. An institution that follows the DCF method can change how it deals with its borrowers if it senses that their ability to repay loans is challenged. This is because the DCF approach brings with it a vectored default rate forecast.

Loss Given Default (LGD)

The loss given default shows us how much the institution will lose if the borrower defaults. This assumption is expressed as a percentage. When it is combined with the PD, we get a measure of the expected loss. The LGD percentage is influenced by factors such as collateral, foreclosure, repossession costs, principal paydowns, etc. The LGD needs historical information, which can be hard to track. To prevent this in the future, institutions can document credit quality characteristics to understand which loans are actually entering loss-making status.

During the estimation process, institutions should use a DCF or non-DCF technique regularly. If a non-DCF approach is used, it has to be applied uniformly to a portfolio. Historically, there has been a lack of consensus on whether LGD should be partially discounted, discounted, or not discounted at all. While implementing CECL, institutions using a DCF methodology should apply a discounted LGD while institutions using a non-DCF-based estimation should apply a non-discounted LGD. For both DCF and non-DCF methods, partial discounting should be avoided.

Recovery delay

Institutions face a delay in recoveries when a loan goes into default. In DCF models, timing is crucial since the delay time has variable effects on the CECL calculation. Based on loan classes, this is often applied across the board.

Discount rate

The discount rate, also known as the effective interest rate, is the contractual interest rate that has been adjusted for any net deferred fees, expenses, premiums, or discounts that existed at the time of origination.

CECL forecasting

CECL's technique needs forward-looking projections. Because of its timing abilities, the DCF approach is best suited for forecasting. While running various scenarios for different forecasts, an institution can include them in a discounted cash flow. Projections would also consider current conditions, the standard historical experience, and reasonable and supportable forecasts.

DCF advantages

- By considering all cash flows and modifying them for behavioral and credit-related elements, the DCF method then calculates contractual life.
- DCF can incorporate supportable and reasonable forecasts based on volatility and timing.
- DCF depends more on facts and less on subjective opinion, making it more defensible.

DCF disadvantages

- The method is highly complex
- It needs a lot of data, both historical and current
- It needs software and related resources to run effectively

Chapter 14

AUDIT READINESS 2 – LAYING THE INFORMATION OUT TO HELP THE AUDITOR

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CECL AND AUDIT READINESS

The Financial Accounting Standards Board (FASB) issued the credit loss accounting standard, the Current Expected Credit Losses (CECL), in June 2016. CECL focuses on expected credit losses over the life cycle of a loan and also on the reserves an institution is supposed to maintain to cover those losses. This is in contrast to the previous standard that relied on incurred losses. When implementing CECL, management will have to judge and estimate future losses. Institutions will have flexibility in developing techniques for estimating and measuring expected credit losses as long as they are consistent with the principles of the standard. Different estimation methodologies may be used by banks for different types of financial assets.

The credit loss allowance is a bank's most important estimate and is scrutinized by auditors and regulators. For audits of financial institutions that have implemented the CECL standard, the allowance for loan losses will be considered a significant risk due to its complexity, estimation uncertainty, materiality, and sensitivity, from a user's perspective. Auditors who audit accounting estimates need to do a high-level lookback analysis to understand the difference between actual results and previous estimates. This will help to assess the management's process reliability.

Auditing estimates and related procedures

Procedures involved in auditing estimates include tests of the management's methodology, evaluation of subsequent events, and tests of controls. In some instances, these procedures would also include the auditor's independent estimate. Since the FASB has not established a standard model, auditors must be prepared to adapt their methods to the facts and conditions present at each financial institution. Auditors are also responsible for auditing-related disclosures, information about the management's methods, and models and assumptions used in calculating the estimate.

The auditors will also look out for any management bias or irregularities in the management's process. Under CECL, the auditor will be required to examine how much evidence is required to substantiate the allowance for loan losses. Institution-specific data would be needed to support all components of the management's allowance for loan loss estimate, including qualitative factors. The FASB standard allows corresponding peer data to be used in certain cases where data is unavailable. The American Institute of Certified Public Accountants' Auditing Standards Board (ASB) seeks convergence of both domestic and international

rules. It has therefore proposed certain changes to its procedures for auditing estimates to align with the International Auditing and Assurance Standards Board (IAASB) revised rules.

Management can discuss their loss estimation procedures with their auditors to set up best practices under CECL. Key discussion areas to review would include the best ways to document the decision-making process and the resulting review and approval procedures. It would be prudent to always maintain records and copies of the final documentation for auditor review.

Challenges faced when providing data to auditors

Auditing an estimate has always been a challenging task, especially when it comes to bad debts. The auditor needs to consider the assumptions and methods used to calculate a CECL estimate and also, how the management's bias can be a factor as far as estimates are concerned. The CECL standard needs more data while auditing the reserve calculations for future losses. From a preparer's point of view, the CECL estimate is more difficult to support and govern. To meet the expectations of auditors and regulatory bodies, preparers have to increase their documentation and implement incremental controls. The five areas where auditors are expected to focus are:

- Models and methods used
- Data
- Qualitative adjustments
- Assumptions
- Controls/Governance

Data and CECL audits

Of the above factors, data is going to be the key factor that preparers can use to align their CECL estimates with those of the auditors. Most preparers initially believed that they lacked sufficient data for loss observations to prepare a relevant CECL estimate. What needs to be understood is that, besides loss history, a CECL estimate will incorporate the following data:

- Production loan data
- Historical loss conditions data
- A reasonable forecast of loss conditions
- Historical and current underwriting behaviors
- Historical and current collateral details
- Prepayment data

Preparers focus on data during implementation and while preparing an estimate. Auditors, meanwhile, focus on this data while reviewing the estimate. The aim for most preparers will be to prove the completeness and accuracy of their data during audits. They should be ready to explain any adjustments and transformations of their data. Erroneous data will also need to be cleansed from the system and missing pieces will also need to be factored in and replaced with valid assumptions. For any manipulations in data, an effective system of internal control needs to be put in place by preparers.

Certain data can be verified against a public source such as the Securities and Exchange Commission (SEC) and can therefore be deemed as transparent data. There will also be times when the data has been sourced by a vendor whose data points can be questioned for validity. In such cases, preparers will have to conduct further tests to attest to the reliability of the data.

Economic data has become an integral part of the CECL estimate, and this includes economic forecasts and historical economic data. A considerable amount of external data will be utilized for economic forecasts that are prepared internally. This data will need to be subjected to a system of internal control for its accuracy and completeness. This will ensure that preparers are more responsible for their CECL forecasts during audits.

Chapter 15

OPTIMIZATION AND RISK APPETITES - VOLATILITY VS ABSOLUTE COST

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CECL OPTIMIZATION AND ABSOLUTE COST

The Current Expected Credit Loss (CECL) accounting standard, which was issued by the Financial Accounting Standards Board (FASB), provides for more timely recognition of credit losses. One of the key aspects of CECL is to select the right methodology to estimate the Expected Credit Losses (ECL) so that institutions can cover these losses by holding the right allowance.

Each CECL method gives us a different result. Banks and other institutions can optimize by checking which method will give them the lowest CECL result and then choose an appropriate one. This will give them maximum capital to channel into the markets, as consequently, they will need to hold the least amount of cash as risk capital. The lowest CECL estimate is also called Absolute Cost.

The challenge, when it comes to this approach, is the possibility that the next CECL estimate could be much higher. This will pose a liquidity problem for banks that do not have these kinds of reserves and would therefore need to make up for it by selling assets. Some banks may tackle this liquidity problem by creating an extra buffer of reserves over and above the capital CECL asks them to hold.

Source: CUNA News

Risk appetite management

While institutions might find it appealing to opt for methods that give the lowest CECL estimates, they will have to manage the corresponding risks by building a capital buffer. The size and scale of the buffer an institution creates around its CECL reserves would indicate its risk appetite. A zero buffer would mean a higher risk appetite where a bank may decide to deal with liquidity issues when it confronts them. A huge buffer would mean that the bank is averse to taking risks and wants to cover for any surprises that may arise.

Another way that an institution might choose to manage its risk appetite would be to calculate CECL using the current scenario and then calculate it for an extreme scenario (where factors like unemployment, housing, and gross domestic product are amplified). This will help them understand which method's results move the most and which ones move the least. Consequently, it indicates which methods are most sensitive to market movements and which ones are least affected. Banks can then pick methods, which do not cause drastic changes in CECL numbers and therefore manage their liquidity flows better.

Volatility of CECL results

As discussed above, certain CECL methods can produce more volatile results than others. Institutions that are looking to reign in this volatility might advise their Board of Governors on which method to choose to stay within their buffer limits. But if the board decides that they want to save as much capital as they can and channel it back into the markets, they might optimize and choose the method with the lowest result. The risk-averse nature of the board would ultimately decide how they deal with CECL volatility.

Institutions will realize that the way they manage their buffers is nothing but best practices when it comes to liquidity management and also optimization against the volatility of results. CECL has introduced a much-needed and improved measure of liquidity management on how banks function. Despite being an accounting standard that counts losses, CECL also has a predictive risk management aspect to it that has an impact on liquidity.

One of the reasons banks have got a couple of years to prepare for CECL is to familiarize themselves with the predictive methods and be ready for the liquidity implications by maintaining relevant provisions. It needs to be understood that under CECL, even if there are no historical losses, you would still make provisions for expected losses based on averages derived under the standard.

CECL, risk management, and return on investment

Most regulations, such as CECL, require more capital to be held in reserve to account for predictive losses. This means less capital for banks to put into the market and, thereby, significantly lower returns. The 2008 financial crisis ensured that appropriate regulations such as CECL were put into place so banks would have sufficient capital to deal with any market shocks. Measures were put into place to ensure that institutions managed their risks while making decent profits and staying in business. This financial safety net saw to it that it was that much more difficult for banks to fail and for depositors to lose all their savings. CECL regulators had the unenviable task of ensuring that the public was protected while allowing cash to flow through the economy. Under CECL, smaller banks faced a tremendous challenge when it came to maintaining reserves and managing day-to-day operations.

In the longer term, CECL ensures that banks maintain a good grip on their liquidity management through sound risk appetite practices. This development should potentially lead us to a robust banking system and an economy that works for all.

Chapter 16

IDENTIFYING ISSUES – HISTORIC COMPARISONS BETWEEN REPORTING PERIODS

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CECL IMPLEMENTATION

In June 2016, the Financial Accounting Standards Board (FASB) issued the Current Expected Credit Losses (CECL) accounting standard. CECL focuses on estimating expected losses over the life of the loan. CECL's effective date has been rescheduled from January 2022 to January 2023 for non-public companies, and from January 2021 to January 2023 for smaller reporting companies. Many financial institutions have already implemented CECL and are well into the process of fine-tuning the standard to adjust to their organizations' framework. Those that have adopted the standard can now focus on their historical data and aligning it for auditing purposes. For those that have just adopted the standard or are about to do it, much can be learned from the experiences and mistakes of those pioneering institutions that have already tested the waters of CECL.

Source: GAAP Gynamics

CECL data and historic comparisons

Historical loan data may be difficult to obtain. Banks can calculate historical loss rates based on this information. CECL also takes into account reasonable forecasted economic conditions and current economic conditions. Under CECL, historical loss experience cannot be calculated using the annual loss rate. When institutions finally have their CECL data in place and have implemented it, they need to make better use of this data. As a best practice, banks and credit unions can use this data and compare it between reporting periods. The benefits of these historic comparisons are listed below:

1. When there is any discrepancy between data belonging to two different reporting periods, banks need to dig deep and investigate the cause of this anomaly.

2. When institutions adopt best practice of comparing their CECL results from two different reporting periods, they can move to the next step, which involves using the data to solidify their organization's accounting framework.

3. Even if the economic conditions are relatively stable in any economy, there is a chance that CECL results can still undergo a swing

between reporting periods. When this happens, institutions need to be prompt to investigate the source to stabilize their expected credit loss allowance and reserves.

4. When institutions focus on historic comparisons of their CECL data, they ensure that they are ready with answers to any challenging auditing questions that may arise in the future. A good best practice would be to do the audit work before the auditor reaches there.

Rectifying CECL result deviations between reporting periods

As discussed earlier, when economic conditions are favorable and most macroeconomic factors are constant, any swings in CECL results should alert the risk management team of institutions. They can investigate these data deviations by:

1. Checking market data and the performance of stock exchanges and financial instruments they deal in

2. Digging deeper into loan portfolios and, if required, into the historic data of a loan itself to understand how it is being affected by factors such as unexpected losses, interest rates, credit risk, profitability, and liquidity

3. The loan book of a bank or finance company shows the value of the loans it holds. In event of any CECL data deviations between reporting periods, banks can open their loan books and check them for their size, principal and interest amounts and data, and the balance sheet details.

4. Investigating how market data fluctuations may be affecting the credit profile of a loan pool as these changes can become more pronounced over time if not checked early and rectified

5. Making it a practice to compare CECL results between two quarters and identifying issues that may arise

The importance of storing each and every piece of data through reporting periods cannot be stressed enough. Documenting this data is equally important as it is the backbone of every institution's audit reporting effort. A well-planned data store, supported by documentation that is meticulously put together will impress the most hardened auditors. To meet the expectations of auditors and regulatory bodies, preparers have to increase their documentation efforts and implement incremental controls. The five areas where auditors are expected to focus are:

1. Models and methods used

2. Qualitative adjustments

3. Data

4. Controls/Governance

5. Assumptions

Auditors of accounting estimates need to do a high-level lookback analysis to understand the difference between previous estimates and actual results. This is one way for them to judge the management's process reliability.

Frameworks put into place by adopting the above-discussed best practices can help institutions avoid any audit-related shocks and pass those audits without glitches. These frameworks can then be put into auto mode to check and verify historic comparisons of CECL data using methods such as trend and stress analysis.

Making historic comparisons between reporting periods has often been an area that has been neglected by financial institutions. CECL implementation and the associated auditing requirements will go a long way in ensuring that these valuable results and data are no longer neglected.

Chapter 17

IDENTIFYING ISSUES - LOAN LEVEL ANALYSIS

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LOAN LEVEL ANALYSIS AND CECL AUDITING

Following the global financial crisis of 2007–09, the Financial Accounting Standards Board (FASB) issued Accounting Standards Update 2016–13, also known as Current Expected Credit Loss (CECL). Using CECL, banks can proactively react to actual and anticipated changes in the credit environment by detecting expected credit losses early. The social and economic impacts of the 2020 recession were felt throughout markets, resulting in higher credit losses and a reduction in earnings and capital for financial institutions.

Such turbulent times call for increased loan-level analysis of the CECL process and methodologies. This auditing process has become challenging with auditors focused on loan data, expected credit loss results, and the methods used to arrive at these results. It, therefore, becomes imperative for lending institutions to monitor their loan pools regularly so that they have the relevant data ready for auditing purposes. They have to compare CECL results from one period to another to locate and rectify any issues.

Factors that can affect a loan pool are discussed below:

1. When a pool involves significant product, industry, region, or borrower risk, allowance can be highly sensitive to changes in the credit environment and can result in credit losses

2. Unexpected economic events such as the COVID-19 pandemic, which had a massive impact on economic activity

3. Many financial institutions experienced a hike in allowance because of their exposure to the likes of dine-in restaurants, hotels, and oil exploration industries

4. Credit scores are important indicators of credit risk and play a vital part in determining the interest rates for a loan

5. Debt to Income (DTI) is an important indicator of risks that exist for residential loan portfolios as it has implications regarding the ability of a borrower to repay the debt based on their existing expenses versus current income

6. The borrower's payment history over a certain period of the loan can affect a loan pool and its credit risks

7. Property value appreciation over life of a loan can affect the riskiness of a loan portfolio

Institutions will have to put a framework in place for the ongoing monitoring and maintenance of their loan portfolio. They can increase their profitability in the long run by pricing loans accurately at the time of origination.

The risk profile of institutions will get a boost by monitoring performance over the duration of the loan. Throughout the US, loan portfolios for most credit unions and banks have evolved over decades. The collection of data for loans can be a time-consuming task for many small institutions. Conversely, institutions can become efficient at identifying risk and then save some money.

Institutions need to have the ability to forensically take apart a loan portfolio and identify any relevant issues that might affect the CECL results. Lenders need to analyze a loan pool over its full cycle and leverage any information that their system might provide. Lenders can ensure the continued profitability of a loan portfolio by monitoring its performance.

Financial institutions need to check current and past reports and get down to the loan level to see if anything is changing with regard to it. They need to explain to an auditor, from the bottom up, about how they have achieved their CECL results.

Sometimes loans need to be individually evaluated as they no longer exhibited common risk characteristics when compared with other loans in the portfolio. CECL is an ongoing process that banks need to get right by striking the right balance between profitability and maintaining reserves for expected losses.

Chapter 18

IDENTIFYING ISSUES - THE NEED TO STORE ALL DATA USED FOR ANALYSIS

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HISTORICAL DATA AND CECL

Most financial institutions have, by now, developed a Current Expected Credit Losses (CECL) implementation plan. If any institution is lacking a comprehensive historical data set, they need to start focusing on gathering data in order to use bottom-up historical loss data effectively in the future. Relevant historical loss data helps banks gain insight into the performance of their loan portfolios historically across different economic scenarios. Institutions that have relied on market data for their CECL calculations need to start using their own data to come up with expected credit loss calculations.

CECL demands a lifetime loss rate, which necessitates the surveillance of a loan portfolio throughout the course of the full economic life cycle. While solutions that use peer group data or market indexes to compensate for the lack of institution-specific data exist, those data sets may not fully represent a bank's own portfolio composition, risk characteristics, or geographic presence.

Source: cu management

The importance of relevant historical data to banks and financial institutions for implementing and monitoring the CECL framework is explained below:

1. Once organizations have the required historical data in place to calculate CECL results, they have to then focus on maintaining, documenting, and storing all this data for audit analysis and internal review purposes

2. A loan portfolio's profitability and risk over the life of a loan needs to be originated, maintained, and monitored by using clean, relevant, data

3. As organizations try to implement and comply with CECL, they may struggle to defend their CECL models and results in front of auditors due to a lack of relevant historical data

4. Every piece of data that goes into a CECL calculation needs to be stored historically

5. As best practice, institutions should start comparing their CECL results between reporting periods to identify issues within loan portfolios

6. Issues within the loan portfolios can only be identified if the right data has been stored so that, during audits, auditors can explore a particular loan pool or specific loan

7. Lenders should consider data over the full lifecycle of the loan, and then leverage as much of the information as their systems will allow

8. The portfolio of loans needs to be continually monitored throughout its life cycle by using relevant data to ensure profitability

9. Lending institutions that are more data-driven are more successful in navigating CECL

10. Lenders such as banks can be more profitable by pricing their loans accurately at origination using the same information needed to comply with CECL

11. A comprehensive data history of the loan is required to estimate the full cost of a loan at origination

Besides the above points, several other factors come into play post CECL implementation that would affect credit within a portfolio. If there is enough data, then banks are able to price the loan accurately. For example, for a residential mortgage portfolio, even after origination, institutions need to periodically monitor loan rate determinants such as:

1. FICO score validity

2. Loan-to-value (LTV) data

3. Debt to income (DTI) data

5. Past due status

6. Payment history and ability to pay in the future

The importance of the above determinants became all too clear for the residential mortgage market during the 2008 financial crisis. That is one of the prime reasons why, through CECL, institutions should compare loan data of every reporting period to understand any major fluctuations that could turn out to be detrimental to their portfolio in the long run. Other than the points listed above, there are other factors of importance to a credit officer such as:

- Occupancy
- Purpose Occupation
- Location of the property, and
- Cash reserves at closing

Any fluctuations in the above data points, if ignored, could dramatically alter the CECL reserve calculations and affect the ability of an institution to channel capital to the markets, thereby affecting profit margins.

Each loan deal follows its own unique pattern of negotiation between the borrower and the lender. These lending deals are based on several data factors, such as:

1. Size of the deal

2. Client history

3. If the borrower has other loans with the lender

5. Deposits made by the borrower

6. Property location and property type

When a framework is put into place by banks to compare and analyze data for each reporting period, it becomes that much easier for them to spot risks and avoid capital loss. The soundness and safety of a financial institution are ensured when they get into the practice of regularly evaluating the credit of their portfolio using well-sourced and well-researched historical data.

Chapter 19

PREPARING FOR PARALLEL RUNS

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TIME FOR CECL PARALLEL RUNS

Financial institutions across the U.S. have been planning for the Current Expected Credit Loss (CECL) accounting standard for several years now. There is a general agreement among financial circles that implementing the Financial Accounting Standards Board's (FASB) CECL standard will be a challenge, especially for small banks and credit unions. Financial markets have only a few months now to prepare for and go live with CECL.

Data preparation, loan pooling, and model validation are just some of the procedures that need to be put into place as we move to a forward-looking credit loss estimation standard. Considerable planning needs to be done before implementing any major change, and CECL is no different. Most institutions plan to execute a parallel run for the CECL process. Understanding the right way to do this will go a long way in laying the groundwork on which the structure of CECL can be built.

Source: cu management

The effective goal of a parallel run is to make sure that the institution is ready to review, calculate, and report on their CECL allowance for credit losses in 2023. This CECL result needs to satisfy the expectations of the management, external auditors, and regulators. Defining the objectives of the parallel run needs to be done early in the project planning phase.

The guiding principles that should define a parallel run for institutions in 2022 are as given below:

1. The 'business as usual' (BAU) process would run in tandem with the parallel run, and the resources needed for it have to be allocated accordingly
2. It is best practice to have at least two complete parallel run cycles that include governance, financial reporting, investor communications, and the external auditor
3. The parallel run and processes that surround it can be divided into the following stages:

   a) Stage 1 - Setting up a system

   b) Stage 2 - Refining and plugging data gapsa)

   c) Stage 3 - Initial results

   d) Stage 4 - Parallel run

   e) Stage 5 - Go Live

Data preparation and readiness are crucial aspects for each bank and credit union. Multiple models are used to calculate the required accounting provision under CECL, and each of them needs a comprehensive set of data to be used. Some examples of the data required are given below:

1. **External peer-group losses:** The Federal Financial Institutions Examination Council (FFIEC) or the National Credit Union Administration (NCUA) can provide detailed information about peer group losses
2. **Bank losses:** This would include any credit losses during the previous reporting periods
3. **Yield curves:** Internal rate of return (IRR) is needed for calculating discounting cash flows, and relevant yield curves are used for these calculations

The idea is to work backward from the CECL 'go live' phase, and make important choices regarding the CECL solution set-up. Various data options must be assessed at this point, and a number of models are needed to be selected. The requirement for each need to be understood, including:

1. Computation requirements
2. Data identification, cleansing, and storage
3. Model audit needs

After this stage, such reporting needs to be developed that can provide enough information to a bank audit team to show that Expected Credit Loss (ECL) calculations are based on relevant inputs and methods. This should be properly analyzed and must include:

1. Macro-economic scenario factors
2. Market data and credit loss curves
3. Obligor behavior scenarios (pre-payment speeds)
4. Peer group losses
5. Qualitative adjustments to reflect local factors

At this stage, the checking and audit reports need to be developed, and the final reporting can be perfected when the time to 'go live' comes closer. Before the first parallel run of the system can start, the entire process needs to be tested end-to-end.

A 'full dress' parallel run at this stage will ensure a smooth transition to the new standard. This will fix the remaining issues and test any new systems alongside the Allowances for Loan and Lease Losses (ALLL) processes that are established. This part of the process is crucial as it has to be a parallel run with no significant changes. This ensures that the CECL results that would be needed in 2023 would be as required. The ECL models will have to be put into place by now. CECL results will then have to be planned in a way that they can be defended during audits. To prepare for audits, reports and dashboards need to be created that allow auditors to:

1. See the results by pool
2. Analyze the data that has contributed to these results
3. View the overall result at a granular level (loan by loan)

The final stage is where the parallel run is executed in which the system needs to operate as if it were live. It has to provide meaningful results without too much intervention. For financial institutions, being prepared by executing a comprehensive parallel run process in 2022 should be well worth the effort.

Chapter 20

CECL - EXPERIENCES FROM IMPLEMENTATION FOR SMALLER BANKS AND CREDIT UNIONS

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CECL IMPLEMENTATION AND ASSOCIATED CHALLENGES

Implementing a new system and processes is never an easy task at any financial institution. to avoid disruption to 'business as usual', a rigorous approach must be taken. While this is true in all cases, CECL being implemented across the full spectrum of smaller 'community' banks and credit unions creates specific challenges of its own.

The reason that a CECL implementation is more complex for smaller banks is simply that it is asking banks to generate reportable, auditable results that use processes that are currently not part of the banks' business model. This is because CECL not only looks at current impairment levels but asks financial institutions to predict future credit losses, using methods and techniques normally only found in larger firms. There are options in the specific methods that can be used, including:

- Weighted Average Remaining Maturity (WARM)
- Discounted Cashflows (DCF)
- Probability of default/Loss given default (PD/LDG)
- Roll Rate
- Vintage

Each of these methods has nuances and consequences that have been covered in previous 'insights'. FIs must be conscious that selecting a single method for expediency and compliance reasons could leave them with larger reserve requirements than their counterparts and at a distinct competitive disadvantage. By maintaining the possibility of using all methods as appropriate by loan pool, they can turn this into a positive competitive advantage.

The end game for a CECL implementation must include:

- Loan by loan auditability
- Full choice of methods by designated loan pool
- Capacity to drill down to Expected Credit Loss (ECL) inputs and computation
- Ease of use and ability to export for reporting
- Low need for secondary system developments such as data cleansing and 'golden data' storage

The problems arise in both the computational power needed to run all options and data availability to drive the calculations. From the perspective of having run multiple implementations of the CECL express system, a few of the 'road bumps' encountered are detailed herein.

Third-party data consistency

CECL takes, as a start point in most of the ECL methods, the current reported losses per pool. These can be accessed via the Federal Financial Institutions Examination Council's (FFIEC) or National Credit Union Administration (NCUA) call reports. An issue that has been found is that programmatically building these links into a CECL program is far from simple. The call reports themselves do not guarantee to maintain the formatting consistency needed for automation.

- In 2022, the FFIEC report changed by a single line, throwing off many spreadsheet-based solutions. This inevitably means that data consistency becomes a manual job to be performed by the CECL preparation team using that format.
- The NCUA also changed the pooling for credit union peer groups, resulting in difficulty of comparing one period to another by pool, and potentially stranding assets out of calculable pools.

Such occurrences can be handled programmatically, with the correct error reporting and data management, but the key is

that it has to be considered now, so as not to cause issues once the CECL system is an integral part of quarterly reporting.

Internal data availability

Some ECL models use internal data such as credit scores and 'Loss Given Default' ratios. These are used at loan origination but not always maintained as the loan runs through its life, especially when it shows little signs of becoming problematic.

This works for Allowances of Loan and Lease Losses (ALLL), but for CECL, poorly maintained LDG numbers or any failure to record credit deterioration can result in ECL numbers being far too high or low. This has been found to be the case in a few instances of GreenPoint's implementation of CECL Express, and has been rectified by:

- Change in process for maintaining credit scores against obligors linked to the loans
- Defaulting missing values for values such as LGD on mortgage portfolios
- Exclusion of certain methods for specific pools due to lack of data

The above solutions are all valid but must be created explicitly when building the system. Attempts to use methods not supported by data within some loan pools may result in zeros finding their way, inappropriately, into the final computations, unnoticed by error checkers.

Lack of benchmarking

One of the most difficult issues is the lack of a benchmark to guide acceptance of the system's output. Smaller financial institutions have not been required to run this type of analysis and, therefore, have just the ALLL to base expectancy on. This makes User Acceptance Testing (UAT) more difficult.

We do know that there should, all things being equal, be an increase in the provision following the introduction of CECL. Given that its aim is to bring in possible losses, even where none have been observed to date, this is inevitable. With that in mind, the following are useful steps to take:

- Select a small sample of loans
- Find the current known ALLL
- Compute the ECL for as many methods as possible, in as detailed and broken down way as possible
- Compare these and use this as the start benchmark increase
- Build out the system
- As pools of loans are added, monitor the benchmark that was created, looking especially for large deviations within a method

At this point, it is as much art as science, but as a rule of thumb from successful implementations of CECL Express, we have found that the range of increase should fall between 20% and 40% above the ALLL.

Lessons learned

In future pieces, we will discuss yield curves and economic data, but the above points are all live examples of what is found and how it is rectified during a standard implementation.

CECL is a journey into the unknown for banks and credit unions, using methods new to the bank, as well as data that may not be kept well or that is unfamiliar to the teams responsible for reporting the result. Success lies in rigor around data management, education on potential pitfalls, and monitoring expectations of the result. In the end, the ability to demonstrate attention to these details is just as important to creating a program that works and will continue to work as is compliance in January 2023.

CECLexpress.com can help in sourcing and maintaining all data required for five ECL methods and allowing banks to concentrate on just their Q-factors.

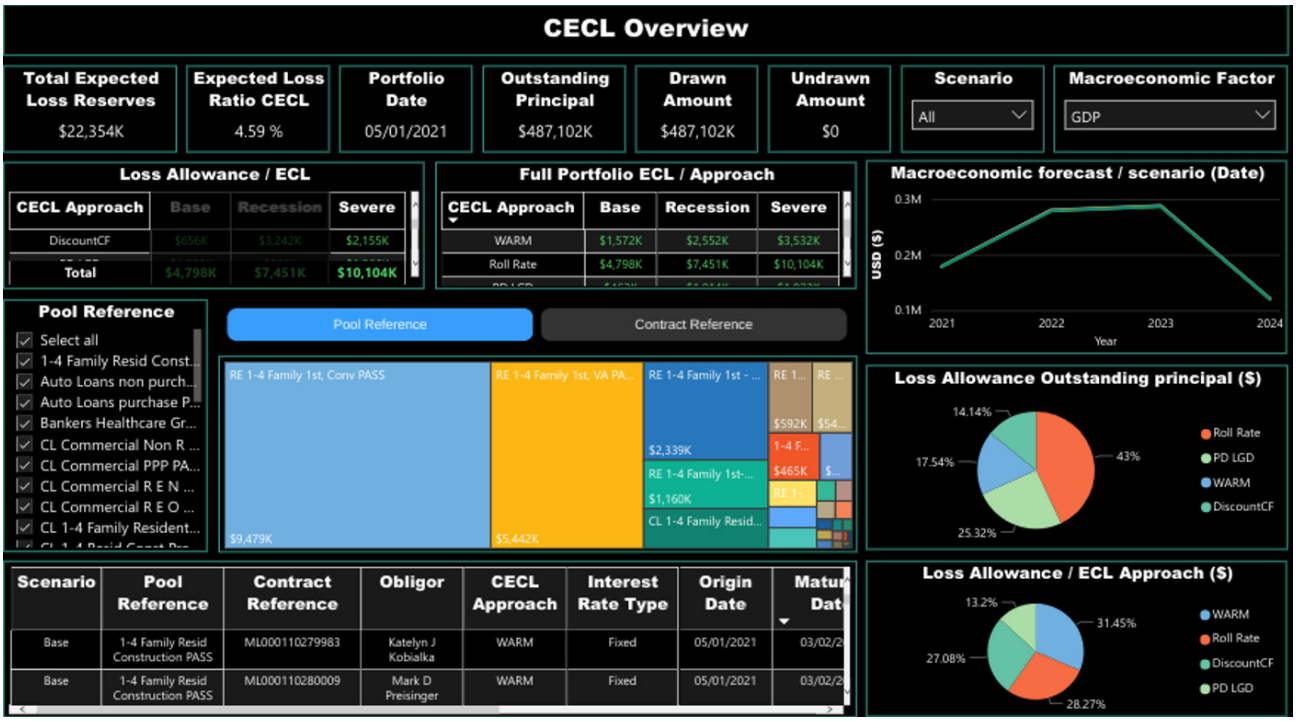
CECL Express can help...

CECL Express is a turnkey solution that fully satisfies all elements of the new CECL accounting standard. The system provides all non-loan data, including:

- Yield curves and Fed data
- Linked reports on losses from the FFIEC and NCUA
- PD and LGD curves
- Macroeconomic data

Banks and credit unions need to only provide the underlying loan details for the system to provide fully auditable ECL results for multiple calculation methods, including:

- Vintage
- Roll Rate
- Discounted Cashflow
- WARM
- PD/LGD



CECL Express provides more than valid ECL results. The system computes results for all methods and all loan pools, allowing the bank to optimize its CECL configuration and avoid the worst impacts of the new standard.

Visit ceclexpress.com for more information about the most efficient route to optimal CECL compliance.

CECL COUNTDOWN SERIES

ABOUT
CECL EXPRESS

- CECL Express is a turnkey, cloud-based solution, designed to provide banks and credit unions with optimized results and reporting that fully meet the 'Current Expected Credit Loss' accounting standards.
- CECL represents a major change in what is expected from financial institutions in their reporting of, and provisioning against potential credit losses.
- Smaller financial institutions are expected to implement forward-looking credit models to estimate losses they may experience.
- Selecting inappropriate 'Expected Credit Loss' (ECL) models will create a need to hold far more capital than is required, directly causing a loss of Profit and Loss (P&L). Data used within these models must also be reported for audit purposes.
- January 2023 will see the first official reporting period for the beginning of CECL. Banks and credit unions must have a framework in place, which is fully tested and reports results based on that data. In practice, this means selecting, implementing, and testing the system in the first half of 2022.
- For Finastra core systems, the integration has already been built. For customers with these systems, their CECL results are ready to be calculated and reported.

GreenPoint> Financial

ABOUT
GREENPOINT FINANCIAL

- GreenPoint Financial is a division of GreenPoint Global, which provides software-enabled services, content, process and technology services, to financial institutions and related industry segments.
- GreenPoint is partnering with Finastra across multiple technology and services platforms.
- Founded in 2006, GreenPoint has grown to over 500 employees with a global footprint. Our production and management teams are in the US, India, and Israel with access to subject matter experts.
- GreenPoint has a stable client base that ranges from small and medium-sized organizations to Fortune 1000 companies worldwide. We serve our clients through our deep resource pool of subject matter experts and process specialists across several domains.
- As an ISO certified company by TÜV Nord, GreenPoint rigorously complies with ISO 9001:2015, ISO 27001:2013, and ISO 27701:2019 standards.

Marcus Cree

MANAGING DIRECTOR AND
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Marcus has spent 25 years in financial risk management, working on both the buy and sell side of the industry. He has also worked on risk management projects in over 50 countries, gaining a unique perspective on the nuances and differences across regulatory regimes around the world.

As Managing Director, Marcus co-heads GreenPoint Financial Technology and Services and has been central in the initial design of GreenPoint products in the loan book risk area, including CECL and sustainability risk. This follows his extensive experience in the Finastra Risk Practice and as US Head of Risk Solutions for FIS. Marcus has also been a prolific conference speaker and writer on risk management, principally market, credit and liquidity risk. More recently, he has written and published papers on sustainability and green finance.

Marcus graduated from Leicester University in the UK, after studying Pure Mathematics, Phycology and Astronomy. Since graduation, Marcus has continually gained risk specific qualifications including the FRM (GARP's Financial Risk Manager) and the SCR(GARP's Sustainability and Climate Risk). Marcus's latest academic initiative is creating and teaching a course on Green Finance and Risk Management at NYU Tandon School of Engineering.

Sanjay Sharma, PhD

FOUNDER AND CHAIRMAN

Sanjay provides strategic and tactical guidance to GreenPoint senior management and serves as client ombudsman. His career in the financial services industry spans three decades during which he has held investment banking and C-level risk management positions at Royal Bank of Canada (RBC) Goldman Sachs, Merrill Lynch, Citigroup, Moody's, and Natixis. Sanjay is the author of "Risk Transparency" (Risk Books, 2013), Data Privacy and GDPR Handbook (Wiley, 2019), and co-author of "The Fundamental Review of Trading Book (or FRTB) - Impact and Implementation" (Risk Books, 2018).

Sanjay was the Founding Director of the RBC/Hass Fellowship Program at the University of California at Berkeley and has served as an advisor and a member of the Board of Directors of UPS Capital (a Division of UPS). He has also served on the Global Board of Directors for Professional Risk International Association (PRMIA).

Sanjay holds a PhD in Finance and International Business from New York University and an MBA from the Wharton School of Business and has undergraduate degrees in Physics and Marine Engineering. As well as being a regular speaker at conferences, Sanjay actively teaches postgraduate level courses in business and quantitative finance at EDHEC (NICE, France), Fordham, and Columbia Universities.