Support your Local CFO: Part II

By **Daniel Parry** - October 24, 2019

Part II: Preparing for CECL

In mid-2016, FASB issued their final guidance on the accounting for loss provision, which requires SEC registrants to accrue in 2020, and non-SEC registrants requiring GAAP financials in 2022. CECL, which stands for Current Expected Credit Loss, represents the most significant sweeping change to bank accounting ever, according to the American Bankers Association *(note – all consumer lenders that require audited financials are affected)*.

The first article in this series discussed the financial impact of the new regulation, as well as the importance of committing resources to the company's CFO in order to be prepared in advance of the change. This article will discuss three important aspects of CECL that must be addressed thoroughly in order to successfully adapt, which are:

- Data sufficiency – the data you have may not be all the data you need
- Comprehensive forecasting – simulating the mechanics of CECL compliance is not enough
- Sufficient planning – process development, testing, reporting and accrual must begin well ahead of the deadline in order to avoid provision shock

Data sufficiency

When lenders begin to account for the performance of each individual vintage, the effects of seasonality and the impact of external factors, many will come to the realization that their data is very thin for the forecasting task at hand. Consider the following example:

- Portfolio size: $200,000,000
- Average amount financed: $18,000
- Total units (size/amount financed): 11,111
- Average life: two years
- Annual units: 5,556

- Monthly units: 463
- Lifetime default assumption: 25 percent
- Percent of defaults complete at 12 months: 20 percent

Using the above assumptions, one would expect 116 defaults (463 x .25) over the life of the pool with 23 defaults occurring by 12 months from origination. Random noise could cause the lender to easily experience two or three defaults above or below the expected estimate, which becomes problematic with small sample sizes. Adding three defaults to the expectation would produce 26 defaults by 12 months in. Extrapolating using the loss timing curve would produce a future gross default estimate of 28.2 percent instead of 25 percent on a single vintage. Taken over the entire portfolio, that would be an increase of $6.4 million in expected gross defaults. Obviously, the model should not be that sensitive to three defaults. The point of this illustration is to show the potential impact when even a large portfolio ($200mm) is split into individual cohorts with small sample sizes.

For this reason, it is important for lenders to supplement their own portfolio data with industry benchmarks that support a more reliable and robust estimate than using internal data alone. This is not only recommended for loss data, but for data related to industry (vehicle value) or economic (recession, debt load, available credit) factors that can have a significant impact on future performance. The auditors, who must sign off on both the provision and the methodology behind it, will always take the highest point among a range of outcomes. A preponderance of valid and reliable external data helps the CFO support the provision estimate and produces a much narrower range of variation in that estimate.

Comprehensive forecasting

FASB has provided extensive detail on the concepts and components related to complying with the new regulation, and it is very complex. The guidance details four specific metrics the auditors will be looking for:

- PD–Probability of Default: the mathematical odds that a loan will go bad in a given time period (forward looking from reporting period)
- EAD – Exposure at Default: the principal balance plus accrued interest at risk if the loan goes bad
- LGD – Loss Given Default: the amounts that would have to be taken into charge if default happens, net of collateral or other recovery (which could happen after default)
- ECL – Expected Credit Loss: the LGD weighted by the PD; the amounts expected given the probability of default

There are a variety of different ways these metrics may be estimated using methods that range from simple to very complex. What most lenders will do is take results from yesterday's environment and project them out for the remainder of each pool and consider their job done; but that should be done with extreme caution as tomorrow rarely produces a mirror image of historical data. I had a professor who once said about a colleague's hyper-complex model, "He has built a very sophisticated watch that does not tell time."

A "detailed and mechanical process" is not the same thing as a "reliable forecast". Forecasting is a very specific discipline within predictive science. It is nothing like traditional scorecard development, where data is frozen from a specific time to create a sorting index. It is not like machine learning, built off of discrete mathematics where the dynamics of error distributions are ignored. It is much more like weather forecasting, where many noisy and random effects interact within a system. Quantitative modelers are very uncomfortable coming to conclusions without concrete data – but that is the nature of the beast. Successful forecasting involves a deep contextual understanding of the environment that models operate within, and there are no shortcuts to obtaining that knowledge.

A lender's historical data contains the effects of things that are often outside the control of the lender. Factors such as seasonality, supply and demand of used vehicles and availability of debt all play a role in what the ultimate outcome will be for a particular portfolio. The bias from these factors must be removed to achieve a baseline forecast, and must be reintroduced based on forward looking estimates.

A simple example of this may be observed by considering the recovery rates for small to midsize vehicles. For the last four years, those units dropped five percent year-over-year at auction. With fuel prices at low levels, those vehicles were not in demand. In late 2016, manufacturers cut production in this category in order to give relief to dealers who could not move the cars. Today there is a shortage of those vehicles, which is driving up their price at the auctions. A lender whose portfolio contains a high percentage of those vehicles might be projecting a 35 percent recovery rate, when in fact they are more likely to experience recoveries in the mid 40 percent range.

Losses come from changes in origination quality, servicing effectiveness and exogenous factors such as the economy. Each of these elements must be de-trended from historical data and reintroduced to the forward looking loss estimate based on individual models of these effects. Many lenders will attempt to manage CECL using a combination of existing internal resources and software tools. Others will spend money on consultants from major audit firms. While both options may produce a compliant provision, they do not insulate the lender from a myopic forecast that could lead to booking millions of dollars more in provision than is necessary or warranted by the data. For this reason, we recommend that lenders invest in guidance from individuals or firms with a significant track record in loss forecasting.

Sufficient planning

The Lord of the Rings author J.R.R. Tolkien wrote, "It does not do to leave a live dragon out of your calculations, if you live near him." The changes brought about by CECL will most certainly be a dragon to lenders who fail to prepare. Some lenders will not survive, and others will be absorbed. Lenders who make a seamless transition into this new construct will do so because they planned far enough out to control the impact of change.

FASB recommends running a parallel process for at least three quarters prior to implementation, which is in line with the plans of the banks that responded to the study conducted by The SAS Institute. During this period, the lender would compare results between the new and old processes in order to determine the expected financial impact. This means that the full CECL compliance program must be designed and tested prior to running the parallel process.

A typical model development and reporting process would take at least six to eight months, whether done internally or through consultants. This is due to the fact that a CECL compliant forecasting model has many moving parts, and will likely require the integration of external data sets. The process would take longer if the company was not already engaged in extensive static pool analysis or was operating without a mature data warehouse. For public companies, if you are not already on this you are very late. For the remaining lenders, this implies that you must be in active development of your compliance methodology by mid-2020.

Support your local CFO

Some lenders are going through intense preparation for the upcoming accounting change, while others are hoping FASB keeps delaying adoption. Regardless, both groups tend to see CECL as the CFO's problem. Nothing could be further from the truth, as the consequences for being unprepared could be devastating to the entire organization.

Depository institutions run the risk of having insufficient regulatory capital, while non-depository lenders may be forced to substantially contract volume–not to mention headcount. Fortunately, those outcomes can be avoided by lenders who support their local CFO and get ahead of the change. Building a CECL process with augmented data and a comprehensive forecast will insulate the lender

from over-provisioning, while a sufficient planning horizon will allow the company to make adjustments well enough in advance to avoid a capital shortfall.

For those who are interested in a more technical treatment of this issue, Dr. John Medellin, TruDecision's CTO, and I have produced a research paper that was be presented at The 16th International Conference on Modeling, Simulation and Visualization Methods (MSV'19) in Las Vegas. This research is posted on our website at www.trudecision.com/cecl.

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