



Shadow Loss Analysis: A Second, Revealing Look at the ALLL

In much the same way the bank uses shadow loan processing for dual accrual accounting of commercial loans, a second or “shadow loss analysis” ALLL methodology could provide greater assurance of accuracy as well as help the bank recognize meaningful trends in its allowance calculations. Such trends could shed light on the bank’s current estimation process and prepare the bank for the more challenging requirements related to the impending CECL (current expected credit losses) estimation model.

In a shadow loss analysis, the bank runs a separate and different loss model in addition to its existing model, or runs the same model with different assumptions, like a longer loss emergence period or different look-back period. Most basically, the shadow loss analysis serves as a check on your existing model. Normally quantitative models have no checks on them beyond management’s judgment and discretion. A second quantitative model applies a “reasonableness” test to the first calculation. While the results of the two are not expected to be identical, the second model allows the bank to note the difference between the two and track it over time. If the two diverge substantially, the trend could alert the bank to problems with its current methodology or at least to questions that need to be addressed.

For example, a shadow loss analysis produces a quantitative reserve number significantly higher or lower than the primary loss analysis methodology. Is the primary loss analysis producing an artificially high or low result due to the parameters placed on it? Is the shadow loss analysis revealing trends in the portfolio that have not yet been borne out by the primary loss analysis?

Shadow methodology

The best methodology to choose for the shadow analysis is likely that which is most complementary to the current model. A bank running a probability of default/loss given default (PD/LGD) model might choose to run a loss migration model as its shadow. If the bank is running a historical loss model, it might want to use some type of migration methodology for its shadow analysis. In tracking the loss experience on a population of loans over a period of several years, migration involves the collection and analysis of a large volume of granular historical data, detail key to analysis and determining more precisely the level of loss and related reserve.

A PD/LGD model would also provide valuable additional detail to a bank running the traditional historical loss model. PD/LGD is more granular by nature. A loss rate expressed as a single variable does not reveal how much of the loss rate might be due to large numbers of loans having small charge-offs or small numbers of loans having large charge-offs. Consider these examples:

- a. Pool 1: PD of 1.25% and LGD of 50%, producing an “expected” loss rate of 0.625%
 - b. Pool 2: PD of 0.70% and LGD of 90%, producing an “expected” loss rate of 0.630%
- The overall loss rate of the two pools is similar but for different reasons. The underlying PDs and LGDs are quite different, which could provide the bank reason to contemplate a variety of considerations, including altering its allowance.

Additional information

Whatever choice the bank makes it should look to the shadow analysis to give it additional information, different from or more than its current model. Additional information will allow the bank to see trends in its portfolios that are hidden in a more traditional homogeneous loss approach. Such trends could alert the bank to a need for additional qualitative adjustments or the use of a loss emergence period. Or it could signal a need for something as fundamental as changes in its lending policy. For example, a PD/LGD analysis could show a trend in declining collateral values or repayment capacity of borrowers in a particular segment that could be “hidden” from sight in the single loss rate metric of a more homogenous pool.

The results of some shadow loss analysis models could help with the documentation and justification of qualitative factors. Using the quantitative analysis from an existing historical loss model and tracking the changes over time, a shadow migration loss analysis model could be used to justify qualitative factor adjustments for “Quality of Loan Review” or “Volume and Severity of Adversely Graded Loans.” If the shadow loss model takes a PD/LGD approach, the changes in LGDs could justify the “Changes in Value of Underlying Collateral” factor as changes are tracked over time.

In fact, the results of a shadow loss analysis could serve multiple applications. For example, PDs & LGDs are common inputs in many stress testing models, as well as models for loan pricing and profitability.

Shadowing CECL

One of the most useful applications for a shadow loss analysis, and reason enough to implement the practice, is as preparation for CECL. A CECL-compliant shadow analysis will tell the bank how CECL will impact its allowance, and as such, provide information key to the bank’s future growth, capital planning and overall profitability. Not only will a CECL-compliant shadow loss analysis provide an accurate rendering of what allowance levels will look like once CECL is implemented, solving the unknown will allow the bank to better deploy its capital. An allowance based on a well thought-out CECL-compliant loss analysis model that has been used as a “shadow” will ultimately be more defensible and better documented than an untested, unproven model. For that reason alone, the benefits of running two models clearly outweigh the requirements for duplicating the process.

*** - The information contained in this and other MST white papers is intended to provide insight and support the bank’s efforts to make appropriate ALLL determinations. However, it does not constitute regulatory policy, nor is intended to replace the exercise of appropriate judgement and analysis of actual circumstances by bank management.*