

Abstract

Credit risk models often diverge from actual outcomes due to shifts in the economic environment, strategic business changes, portfolio rebalancing, regulatory updates, and data limitations. Traditionally, practitioners adjust model PDs by applying a calibration scalar based on historical default rates, typically from the past 12 months. However, this approach is inherently backward-looking, suffers from lagged data issues, and may be non-representative of current portfolio characteristics.

Our proposed method addresses these shortcomings by employing a forward-looking calibration process that leverages projected 12-month default rates. Instead of relying solely on default observations from a year ago, we estimate future default rates using established techniques such as the chain-ladder method commonly used for Loss Given Default Models. A carefully selected calibration window is then used to compute a median calibration scalar that adjusts the model PDs. This approach minimizes the bias introduced by outdated historical data and ensures the calibration reflects more recent market dynamics.

The methodology was applied to a personal loans portfolio in South Africa, where backtesting under both volatile and stable conditions demonstrated improved alignment between model predictions and projected default rates. By striking an optimal balance between statistical stability and responsiveness to recent trends, the method offers a robust and forward-looking risk assessment framework that meets IFRS 9 requirements. Ultimately, this calibration approach not only enhances predictive performance but also supports more effective risk management and regulatory compliance in an ever-evolving economic landscape.

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