The new accounting standards of IFRS 9 internationally and CECL for the US require creating lifetime loss forecasts for loans. Historically, some kinds of models, like roll rates and state transition models, have been observed to perform well at the start of the forecast, because they key on delinquency, which is important for near-term accuracy. Conversely, vintage models have proven to be accurate for long term forecasting, but may be less accurate in the beginning as they usually do not consider delinquency. The multihorizon discrete time survival model was developed to combine the best attributes of both of these models in order to provide both near-term and long-run accuracy, especially in support of CECL and IFRS 9 State 2 lifetime loss forecast requirements. This is achieved by using different coefficient estimates for different forecast horizons, each with the input scoring factors lagged corresponding to the need of the horizon being forecast.

The model is shown as applied to a combined Fannie Mae and Freddie Mac conforming mortgage portfolio with comparison to roll rate, vintage, and state transition models. The multihorizon discrete time survival model performs well across all forecast periods, providing the accuracy lenders expect for both near-term and lifetime forecasts.