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# Calibration of a Regime-Switching Interest Rate Model

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For insurance company stress-testing purposes a model of long-term interest rates derived from the Black-Karisinski model has been proposed with the mean-reversion target treated as a regime-parameter, changing randomly from time to time. The unobservable character of such random reversion targets, and their switching times, makes calibration of the model to historical data difficult. We illustrate such a calibration against 60 years of historical data using a pragmatic mixture of filtering, maximum likelihood and method of moments techniques, and compare the resulting model with interest rates in contemporary economic scenario generators.