

Abstract of third year paper

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This paper shows comparison of Particle filter to Kalman filter when estimate linear Gaussian, linear non-Gaussian state space models and estimate stochastic volatility (SV) model. To do these comparisons is because we want to exam whether particle filter is a good candidate for dealing with non-linear or non-Gaussian relationship. Finally, we provide a prospective solution to zero lower bound interest rate issue by combining stochastic volatility (SV) model and Tobit model together to create stochastic volatility model with zero lower bound (SVZLB) and applying 3-month Treasury Bill rate to it.