Estimation the Yield Curve of Nelson-Siegel Model and its Extensions by L-BFGS-B Method Optimization Approach

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This paper discuss yield curve by using Nelson-Siegel and its extensions. The Extensions of Nelson-Siegel models discussed are Nelson-Siegel Model, Svensson Model, Rezende-Ferreira model and Svensson extended model. Svensson model development was begun by some practitioners who were thinking that macro and micro economic factors affected bond yields. The development of this model is done by adding these factors into the Svensson model. The model class has linear and nonlinear guidelines so these models have multiple local minima. This condition causes the model estimation more difficult to estimate. We estimate these models by using NLS estimation with L-BFGS-B method optimization Approach.

Key Words: Yield Curve, Svensson Extended Model, Macro and Microeconomics