

## Abstract

This thesis contributes to the topic of yield curve modelling by revaluing the famous Nelson-Siegel model in the relatively outdated but very parsimonious version. In order to make this framework applicable to present yield curves of government bonds, we introduce an alternative model dealing with an appropriateness of the possibly overlooked model parameter  $\lambda$ . By incorporating the sound methodology, we model the yield curves of the three currency regions - EUR, USD and GBP - and assess both in-sample fit and forecasting performance. Whereas the in-sample predicting generally achieves the best results with the alternative model predicting model coefficients, especially for longer maturities, the out-of-sample forecasting seems more complicated. Actually, the detail analysis show an interesting connection between efficiencies of the models and bond market volatilities. On the base of our research, the model directly extrapolating yields appears to be more suitable for more volatile markets.

**JEL Classification** C51, C53, C61, G17

**Keywords** Yield Curve, Nelson-Siegel, Newton Optimization Method

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