

Proposed content of final document for the course T-620-FJAX Finance X

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Interest rate models for the Icelandic bond market

General discussion of,

- Interest rates
- Bonds
- Nominal bonds in the Icelandic market

More advanced subjects like,

- Interest rates – role of interest rates in the economy
- Bonds – how they depend on interest rates and how interest rates can be extracted from the prices of bonds
- Fitting the term structure of interest rates directly from bond prices – issues and challenges
- Techniques to fit the term structure of interest rates
- Construction of the spot curve, forward curve, swap curve
- Discuss different techniques like,
 - Bootstrapping
 - Nelson-Siegel
 - Polynomials
 - Cubic splines
 - Constrained cubic splines

Stochastic models for interest rates,

- Simple stochastic models – like the Wiener model – issues and limitations
- The Vasicek model – discuss the model in general
- How does one fix (calibrate) model parameters - issues and problems
- Vasicek model for the pricing of bonds
- Vasicek model for the pricing of interest rate derivatives

Comments. Always make reference to literature you may consult