Ho-Lee Model

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What is a short rate model?

Mathematical model that describes future evolution of interest rates

Does this by calculated the short-rate r

Also known as the instantaneous spot rate

We will explain what all these are

Ho-Lee Model

First and most basic short rate model

Used to simulate bonds, swaps, and other interest rate derivatives

Classified as a one factor short rate with time varying drift

Simulation - Negative Swap Spreads

Present a theoretical arbitrage based on negative swap spreads

Analyze how this strategy performs in real life

Use Ho-Lee model to generate simulations

Timeline

Week 1 - Introduce short rate

Week 2 - Introduce Ho-Lee Models

Week 3-4 - Familiarize with Ho-Lee Models with examples in r

Week 5-6 - Introduce arbitrage strategy

Week 7-10 - Simulations and testing