Yield Curve Interpolation Methods

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1 Introduction

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1.1 Motivation

1.2 Objectives

1.3 Methodology

Table 1: Desirable Features of a Good Interpolated Yield Curve

Feature	Description	Why Important
No-arbitrage	Forward rates are non-negative	Ensures that the constructed yield curve does not imply arbitrage opportunities, which is crucial for accurate pricing of financial instruments.
Exactness	Reproduces market prices	Ensures that the yield curve accurately reflects the prices of the underlying market instruments, leading to reliable valuations.
Locality	Changes in one part of the curve do not affect distant parts	Allows for adjustments to specific segments of the yield curve without unintended consequences on other segments, enhancing flexibility in curve construction.
Stability	Small changes in input data lead to small changes in output	Ensures that the yield curve is robust to minor fluctuations in market data, providing confidence in the derived yields.
Local Hedging	Enables hedging of instruments using nearby maturities	Facilitates effective risk management by allowing traders to hedge positions using instruments with similar maturities, reducing basis risk.