



Master thesis in Mathematics-Economics

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Swaptions pricing

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Abstract

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1 Introduction

In this thesis we will investigate swaptions pricing.

2 Swaptions as a missing link in asset allocation

Look at pdf from Noamura

3 Mathematics of pricing swaptions

Look at Swaption pricing and isolating volatility exposure

3.1 Time value of money

3.2 The yield curve

3.3 Forward rates

3.4 Bonds

3.5 Financial derivatives

3.6 Interest rate swaps

3.7 Options

3.8 Swaptions

4 SABR Implied Volatility and Option Prices

Look at The SABR model

4.1 Process for the forward rate

4.2 Estimating Parameters

5 Data and the Volatility Risk Premium

Look at Broekmans

5.1 Data

5.2 The volatility Risk Premium

References

- [1] Armstrong, M.A. Basic Topology. England: Editorial Board, 2000.