
Matlab files and Excel spreadsheets

This short document lists all the matlab scripts and Excel spreadsheets used in both the exercises and examples for “Stochastic Interest Rates”.

Chapter 1

- Example 1.10 (Figure 1.1): run **yield_curve_swaps.m**
- Remark 1.11 (Figure 1.2): run **Libor_curve.m** with variable **file_name** set to **usd_curve_18May2011_ex2.csv**.
- Remark 1.12 (Figure 1.3): run **Libor_curve.m** with variable **file_name** set to **usd_curve_18Apr2007.csv**.
- Remark 1.13 (Figure 1.4 and 1.5): run **yield_curve_swaps.m**

Chapter 2

- Section 2.9 (Figure 2.1): run **implied_volatility_data.m**.
- Example 2.8 (Figure 2.2): run **implied_volatility_data.m**.

Chapter 3

- Example 3.4 (Figure 3.1): run **Libor_curve.m** with variable **file_name** set to **usd_curve_18May2011_ex2.csv** and **IS_VASICEK = true**.

Chapter 5

- Section 5.7 (Figure 5.2): run **volatility_curves.m**.
- Example 5.8 (Figures 5.3 and 5.4): run **forward_rates_historical.m**.
- Example 5.11 (Figure 5.5): run **doust_correlation_empirical.m**. Script saves file named **doust_Mar2013.mat** which is used in later examples.

Chapter 6

- Example 6.2 (Figure 6.1): run **correlation_rank4.m**.
- Examples 6.7 and 6.8 (Tables 6.1 and 6.2): see Spreadsheet **LMM MonteCarlo Example_Cap.xlsm**.

Chapter 7

- Section 7.4 (Figure 7.1): see Spreadsheet **LMM MonteCarlo Example_RatchetFloater.xlsm**.

Chapter 8

- Sections 8.3 and 8.4 (Figures 8.1 to 8.4): run **forward_rate_CEV.m** with the appropriate settings listed at the beginning of the script:

```
% use these settings for  $F(0) = 1\%$ 
F0      = 0.01;
stepSize = 0.0005;
% use these settings for  $F(0) = 5\%$ 
F0      = 0.05;
stepSize = 0.002;
```

- Example 8.1 (Figure 8.5): run **displaced_diffusion_skew.m**.
- Remark 8.2 (Figure 8.6): run **CEV_forward.m**.
- Section 8.5 (Figures 8.7 and 8.8): run **SABR_dynamics.m**.
- Section 8.5 (Figures 8.9): run **SABR_forward.m**.