

“Yield curve fitting” assignment

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1 Data

Next to this file, you will find a set of Bloomberg screens with bond data. Use those bonds to answer the questions below.

Remarks:

1. For each bond, use the last price. For example, for “BUBBILL 0 02/15/17”, the price is 100.021%.
2. Note that the dates in the BB screens are MM/DD/YY
3. The prices shown are *Full/Invoice/Dirty* prices.
4. The settlement date for all bonds is 2/Feb/2017.
5. For all bonds, count days on a 30/360 basis (since we do not have to compute accrued interest, we can ignore the fact that different bonds may have different day count basis).

2 Questions

Ex. 1 — Estimate the Yield to Maturity (with continuous compounding) for each bond. Your output should consist of a figure with all YTM.

Ex. 2 — Estimate the model of Nelson and Siegel and then the model of Svensson. Briefly describe how you defined the initial parameter values for each model. Your output should include the following:

- A table with the final parameter estimates for both models, like:

	Nelson-Siegel	Svensson
β_1		
β_2		
β_3		
β_4		
λ_1		
λ_2		

- A figure with the yield curves from the two models, and also with the Yields to Maturity for all bonds.
- A table with the following rate estimates from each model:

	Nelson-Siegel	Svensson
$r_{\infty}(0, 1/52)$		
$r_{\infty}(0, 0.5)$		
$r_{\infty}(0, 1)$		
$r_{\infty}(0, 5)$		
$r_{\infty}(0, 10)$		
$r_{\infty}(0, 30)$		

Ex. 3 — Is one model giving you better results than the other? Why? (max 15 lines)

Remark: You first need to explain what “better results” should mean in this context. Preferably, present quantitative arguments (ie, numbers) to support your answer. There may be more than one good way to answer this question.