6 1 z spread strategy

Vladimir V. Piterbarg

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In this assignment you will be exploring some of the concepts from Topic 3 and Topic 6, specifically $z-$spreads for government bonds, specifically Guilts (GBP government bonds). Relevant market data is available in the Resources folder, the Bloomberg historical data with historical data for swaps (needed to build Sonia curves), and .Gilts_Historical_Data_XXX spreadsheet with everything needed for bond calculations

The question you will be trying to answer is whether buying bonds with abnormally high $z-$spreads and selling those with abnormally low $z-$spreads is profitable over a medium term. You will need to

1. Build the OIS (Sonia) curve for each day over 1 year of history, say
2. Calculate $z-$spreads for a selection of bonds. Benchmark bond price history is available in the spreadsheet I mentioned
3. Fit an NSS curve for each day to these $z-$spreads. This will be a best fit so some bonds will be above, and some below
4. Explore, using Python, if the strategy of buying the high outliers and selling the low outliers make money over 3M, 6M, 1Y time horizon

Most of the methods for doing this are available in the FinancePy package linked in the Resources folder