QR Credit Quant test

Contents

In the following assessment your goal is to demonstrate good knowledge of CDS analytics. Pleased package you solution in a way that makes life easy for the person who will be checking it. Please include clear instructions of how to run it.

Simplest way to share your solution would be to have it in your personal github repository, which you can share with **isaroka-sf** (`isaroka@schonfeld.com`)

1. Pricing Credit Default Swaps

1. Describe the methodology for pricing Credit Default Swaps, what are the various models available? Please comment on the underlying assumptions.
2. Implement a small prototype in Python of the CDS pricer, please discuss main inputs. It must give us access to the main underlying quantities (par spread, pv etc). For the purpose of the prototypes you can disregard things like calendar and conventions, focus on the modelling, however state clearly the assumptions you make.
3. As an example price a 5y CDS with 40% recovery, 1% constant credit spread, 4% constant risk free rate, a %1 CDS coupon and no upfront payment.
4. Graph the changes of the par spread as a function of recovery rate.

2. Credit curve stripping

1. Describe the methodology for stripping the credit curve in a multiple CDS?
2. Implement a small prototype in Python of the credit curve stripper assuming only a single CDS is quoted.