Caselet #23—Par and Spot Curve Movements

Learning Outcome Statement

After completing this caselet, students and trainees should be able to explain how par and spot curves move relative to one another, and why.

Caselet #23

Renowned Darla Moore School of Business graduate and bond analyst, Ms. Jane Gotzrox, seems extremely pleased. “Sparky,” she says, “Good job on the bootstrapping. Now, it’s time to use your bootstrapping skills again."

“Some analysts think that they have figured out the relationship between STRIPS and coupon bonds, and that the spread from any STRIPS to the par bond of the same maturity between 10s and 30s depends on the 10s/30s par spread, which is right enough as far as it goes. But, for a constant 10s/30s slope, the spread from STRIPS to par bonds between 10s and 30s also depends on the 2s/10s spread.”

“Here’s what I want you to do. First, create a User Curve in Yield Book Add-in. Fix all par yields from 6 months to 10s at 6% and the bond’s yield at 8%. Interpolate linearly between 10s and 30s. Then compute spot yields for the entire curve. Store the values of the spread between each spot yield and each par yield between 10s and 30s for later comparison.”

“It's probably easier to see the effects if you plot the par and spot curves. You should fix the scale of the Y axis so that you can see the effect as it occurs.”

“Once you have your numbers and graphs, I want you to leave 10s/30s unchanged while you steepen 2s/10s. Richen 2s and all shorter maturities by 200bp and interpolate linearly from 2s to 10s. Rerun your par and spot curve calculations. You’re ‘rounding the clubhouse turn,’ now, Sparky.”

“Finally, compute the change in the STRIPS/par bond spreads between 10s and 30s – that’s easy – and explain why the spot curve steepens from 10s to 30s in this case even with 10s/30s par yields holding constant – that’s not easy.”

“Sparky, this caselet will make a fine entry in your interview notebook. Be sure that you write a clear enough explanation that it will all come back in a flash if you revisit this question.”