Caselet #12 – Sparky Learns About DV01

Learning Outcome Statement

After completing this caselet, students and trainees should be able to explain why dv01 is the fundamental measure of risk in fixed income.

Caselet #12

Renowned Darla Moore School of Business graduate and bond analyst Ms. Jane Gotzrox is in an unusually good mood.

“Sparky, “You’ve been making great progress. There’s a good chance that you will do me proud and uphold the ‘Sparky reputation’ when this semester is over. Waytago!

“Your next task is to explain bond risk, correctly. The fundamental unit of risk in fixed income is, of course, dollar-value-of-a-basis-point (dv01). Since ‘dee-vee-oh-one’ comes rolling off the tongue so easily, I’ll never know why anyone would use price-value-of-a-basis-point (PVBP), which is just too cumbersome. Oh, well!

“Now, as I’ve explained to you a dozen times already, dv01 is: (modified duration x full price) / 10,000”

“Here’s the challenge. Using the Yield Book Add-in screens and, maybe a little math, to illustrate your point, show why the full price is the correct value for computing dv01. Use the on-the-run 10-year Treasury. Price it at par, irrespective of the facts in the marketplace. It will probably be helpful to choose a day before a coupon payment compared with the coupon payment date to make the point.”

“Here’s a hint, Sparky. Duration measures percentage change in price for a one percentage point change in yield, where’s the money? And, here’s another hint. What happens to full price over time? What happens to modified duration over time? Is that an accident? I think NOT!”

“While you are at it, write a paragraph or two about why 10,000 is the correct denominator for dv01.”

“Sparky, give me a copy of all of the pages that you put into your interview notebook. Make them correct and convincing.”