Caselet #19 – Sparky Hedges 10s

Learning Outcome Statement

After completing this caselet, students and trainees should be able to explain how to hedge Treasury on-the-run 10-year notes with 2s, bonds and Treasury futures.

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Sparky, why do investors buy 10-year Treasuries?

I know, Ms. Gotzrox, they buy them for their returns. Dollar returns, of course, just like you have told me.

Good, Sparky. Why do investors hedge 10-year Treasuries?

I know, Ms. Gotzrox, they hedge them to avoid the risks of losing money when interest rates increase.

Sparky, do you see any contradiction in your two answers? If investors take on the risk of 10s for their dollar returns and hedge away those risks, what do you think they will earn on their investment?

Oh, I see, if they are hedging the risk, they have to earn the risk-free rate. They are just bearing transactions costs to build synthetic Treasury bills or shorter dated Treasuries.

So, Sparky, the hedging must be intermittent. Investors who ordinarily want 10-year Treasury interest rate risk do not want it for some brief time. Alternatively, the hedgers could be dealers who find themselves holding 10s, while they look for investors to take them off their books. In any event, I want you to hedge 10-year Treasury notes three different ways.

First, I want you to find the dv01 for 10s, the dv01 for 2s, the dv01 for 30s and the dv01 for 10-year Treasury futures. Why dv01s, Sparky? Do you remember? Next, calculate the hedge ratios. How many 2-year notes does it take to hedge $1 million of 10s? How many 30s? How many futures contracts? Careful with the futures, Sparky; they are easy to get wrong.