Homework 5. Quantitative Methods for fixed Income Securities

CHAPTER 8

8.1 Show the following relationship between price/duration and face value/DV01

$$D \times P = F \times DV01 \times 100$$

8.2 You consider hedging 6.5s of August 15, 2004, with 6s of May 15, 2011. Taking changes in the yield of the 6s of May 15, 2011, as the independent variable and changes in the yield of the 6.5s of August 15, 2004, as the dependent variable from July 2001 to January 2002 gives the following regression results:

Number of observations	131		
R-squared	77.93%		
Standard error	4.0861		
Regression Coefficients		*Value*	*t-Stat*
Constant		–.0007549	–2.1126
Change in yield of 6s of 5/15/2011		.9619	21.3399

Let the DV01 of the 6.50s of August 15, 2004 be 2.796, and the DV01 of the 6s of May 15, 2011 be 7.499. Using the regression results given, how much face value of the 6s of May 15, 2011, would you sell to hedge a $10,000,000 face value position in the 6.50s of August 15, 2004?