FIL 240 & 404 – Trefzger
SPREADSHEET PROBLEM 3
Bond Valuation (Special Feature: IF Statements)

The focus of this problem is computing the theoretical, or intrinsic, value of a bond. This problem also introduces (to those who may not have used it before) the IF statement, a very useful spreadsheet application.

We set up the spreadsheet to deal with a bond whose original maturity was ten years, with interest paid semiannually. We will look directly at remaining periods until maturity of 8, 4, 2, and 1 years, but our objective is to have a versatile tool that lets us easily compare values for periods remaining until maturity ranging from ½ year to 10 years, and for different current required rates of return (yields to maturity). So construct the spreadsheet so if the user wants to change input values, including remaining time until maturity, all the output values change automatically. Cells the computations are based on should contain formulas or cell references and not just typed-in numbers, and see the accompanying file on avoiding the NAME error message. We want this spreadsheet to be a versatile tool for analyzing bonds with remaining maturities of up to 20 semiannual periods.

Assume that the bond has a $1,000 par value and an annual coupon interest rate of 9%. Your assignment is to compute the bond's theoretical value under the following sets of conditions (12 combinations in all):

        First Sheet: 10.25% effective yield to maturity, for 8, 4, 2, and 1 years remaining
        Second Sheet: 9.2025% effective yield to maturity, for 8, 4, 2, and 1 years remaining
        Third Sheet: 8.16 % effective yield to maturity, for 8, 4, 2, and 1 years remaining

Thus, you should plan to have **_THREE EXCEL WORKSHEETS IN THE WORKBOOK YOU UPLOAD TO REGGIE NET_** (or three separate pages if we collect hard copies), one for each indicated effective yield to maturity.

A set of fairly detailed instructions is provided for anyone who would like to use it. You might try to develop a creative solution to the problem on your own, but be sure that you show all of the main computational steps assigned and the related output. On page setup please select landscape orientation to make the output easier for the grader to read. If you submit electronically, please have one workbook with three separate worksheets (pages). If we are asking for hard copy submissions please print your output for each yield to maturity case on one page; using less paper saves money and trees, and makes the grading process easier (less page-flipping).

WHAT YOU SUBMIT SHOULD BE YOUR OWN INDIVIDUALLY-COMPLETED, ORIGINAL WORK. OUR SPREADSHEET ASSIGNMENTS ARE NOT GROUP PROJECTS OR CUT-AND-PASTE EXERCISES.