Problem set 2:
Fixed Income Analysis

Problem 1

a) In December 2014 the commerce dept. released revised GDP numbers suggesting that the US economy grew at a rate of 5% in the third quarter. Discuss what you think the impact of this is on the yield curve.

b) You're anticipating another strong GDP number for the 4th quarter of 2014. You can buy 2 year or 30 year treasuries. Which one do you choose?

c) The QE programs are widely anticipated to be discontinued in 2015. What do you think will happened to the price of the 2 year and 30 year treasuries if these expectations materialize later in 2015?

Problem 2

a)

Write a VBA function that computes the value of an annuity for T years. Assume that the cash flows occur annually for T years. The function should be taking three arguments T (maturity), r (discount rate), C the cash flow. Use the function to compute the value of a security that pays $C = \$10$ each year for 10 years using a $r = 0.02$.

b) DV01 is a measure of risk. Specifically, it measures the amount that the bond price will change as the YTM on the bond increases by a single basis point (1/100th of a percent).

Write a VBA function that takes as input arguments the settlement date, the expiration date, the current YTM, and the coupon, that returns the DV01.

Use the function to compute the DV01 on all the bonds in the spreadsheet.

Hint: Use the VBA code in the spreadsheet "ytmBadDates2015CLASS.xlsm." Your DV01 function should make two calls to the "bondValue" function that is already in the spreadsheet using the current YTM and the YTM plus one basis point, and then take the difference.