Problemset 3 - Fixed Income

Problem 1

Consider Problem 1, problem set 1 again.

a) Compute the duration, dollar duration and modified duration for the bond.

b) Compute the approximate impact of a 30 basis point increase in the ytm on the price of the bond using an appropriate measure of duration.

c) Compute the exact change in the price of the bond.

d) Discuss why b) and c) differ.

The FED changes the short term interest rate so that $d(161) = 0.999$. All other values of the discount function remain unchanged.

e) Compute the new price of the bond.

f) Compute the corresponding change in the ytm of the 161 day zero.

g) Discuss why this change in the yield curve is not something that we can easily hedge using duration.