HOMEWORK 2

1. Using the raw STRIPS data, graph the spot curve and the 3 month forward curve out to the longest maturity of the data.

2. Assume that the discount function can be expressed by the following polynomial function

$$D(T) = \exp(aT + bT^2 + cT^3 + dT^4 + eT^5)$$

Using the STRIPS data, estimate the coefficients a, b, c, d, and e by regressing the log of $D(T)$ on the indicated powers of T.

3. Plug the estimated coefficients back into the $D(T)$ function and graph the resulting spot curve at semiannual frequencies out to 25 years.

4. Using the estimated discount function, solve for the par rates at semiannual frequencies out to 25 years. Graph these rates.

5. Using the estimated discount function, solve for the 6 month forward rates at semiannual frequencies out to 25 years. Graph these rates.

6. Assume that the par curve for maturity T is given by the following function

$$Y(T) = a + bT + cT^2 + dT^3 + eT^4 + fT^5$$

Using the Treasury note and bond data, bootstrap the spot curve.

From this bootstrapped curve, graph the resulting spot curve, par curve, and 6 month forward curve out to 25 years.

7. Compare the spot, par, and forward curves from fitting the STRIPS curve with those from fitting the Par Curve. What do you attribute the differences to?