

## Assignment 6: Answers

(April 6, 1998)

1. Basic calculations for corporates.
  - (a) Price and yield on the treasury are  $p = 102.16$  and  $y = 6.467\%$ .
  - (b) Price and yield on the corporate are  $p = 101.11$  and  $y = 7.204\%$ . The spread is 73.7 BPs.
  - (c) We infer “default rates” (really, an amalgam of default rates, recovery rates, and the risk premium on defaults) from ratios of discount factors for treasuries and corporates. The so-called default rates are 0.12%, 0.48%, and 1.08%, resp, over 6, 12, and 18 months.
2. Brady calculations.
  - (a) Blended yield is the basic yield-to-maturity: 10.6175%.
  - (b) The PV of the principal is  $100/1.07^{25} = 18.425$ .
  - (c) This is the yield on the bond’s sovereign cash flows only — ie, after we’ve stripped off the guaranteed principal. The cash flows are 25 payments of 6 each. The price is  $60 - 18.425$ . The yield is 13.871%. This yield is a lot higher, since we’re not factoring in the relatively low yield on the guaranteed principal.
  - (d) This is the premium added to spot rates on the sovereign cash flows. Since the spot rates are flat at 7%, this is just the spread between the stripped yield and treasuries:  $13.871 - 7.000 = 6.871$ .
3. Your choice. I look forward to seeing some interesting ones.