## Show all work and clearly indicate your answer! Please answer only the question that I ask directly.

1. Suppose that International Paper just issued 4 -year $7 \%$ coupon bonds-that make annual payments. These bonds sell for par. At this time 4 -year Treasury bonds are yielding $3 \%$ on a continuously compounded basis.
(a) (11 points) Build a time line of the purchase and promised future cash flows on this International Paper bond i.e., the cash flows that a buyer makes and would receive if International Paper does not go bankrupt in the next four years.
(b) (11 points) What is the continuously compounded yield to maturity on the International Paper bond?
(c) (11 points) What is the credit spread (yield spread over Treasury, on a continuously compounded basis) on this International Paper bond?
(d) (11 points) Build a time line of the "survival probabilities" for International Paper over the next four years.
(e) (11 points) Build a time line of the expected future cash flows on these International Paper's 4-year 7\% coupon bonds.
(f) (11 points) What continuously compounded rate -when correctly used to discount the expected future cash flows from the time line in (e) will yield the bond's market price as the sum of those discounted expected future cash flows? Explain.
(g) (11 points) At the same time International Paper issued its 4 -year bonds, Weyerhauser issued 4 -year $8.5 \%$ coupon bonds-that make annual payments, that sell for par. What is the credit spread (yield spread over Treasury, on a continuously compounded basis) on this Weyerhauser bond?
(h) (11 points) Contrast International Paper and Weyerhauser: Which company has a higher probability of going bankrupt over the next four years? Explain.
(i) ( $\mathbf{1 2}$ points) Which of the three 4 -year bonds in this question: US Treasury, International Paper and/or Weyerhauser, has the highest expected return? Explain.
