Due date of Homework Two and Summary: April 13, 05 (Wednesday)

This assignment is related to the comprehension of the following paper (downloadable from our Library):

“Strategic debt service,” P. Mella-Barral and W. Perraudin, Journal of Finance, vol 52 (June issue), p.531-556 (1997).

You are required to review the paper only up to Section 2, part B (p.542). Please address the discussion points outlined below. You are welcomed to add more of your opinions on the paper.

1. Provide the details on the derivation of the results in Proposition 1 [Eqs. (6-7)]. The Appendix provides some hints already. Give the justification of the boundary conditions. How do you interpret the no-arbitrage condition, no bubbles condition and smooth-pasting condition as stated in the last but one paragraph on p.534?
2. Similarly, provide the details on the derivation of the results in Proposition 2 [Eqs. (13-16)]. When the principal exceeds b / r. explain why the value of debt may be decreasing in the state variable p (see footnote on p.537)?
3. Explain why the firm is liable to “liquidation bankruptcy” in the future if Ineq. (19) is satisfied.
4. Show how to obtain the trigger level p_s in Eq. (26) and provide an economic interpretation of this trigger level. Why when $\Upsilon < b / r$, explain why the trigger price for efficient liquidation is less than p_s (see Corollary 2 on p.542). Provide extended mathematical and/or financial arguments and your understanding that whenever debt is risky, there is scope for renegotiation (other than those presented by the authors in the last paragraph in Sec 2B, p.542).
5. Imagine yourself to be a critical referee of the paper, how you view the strengths and weaknesses of the model? For example, we assume perpetual life of the debt, constant scrapping value after bankruptcy, the use of price of an output product as the underlying state variable, high flexibility to negotiate the service flow, etc.