**Review Questions and Problems for Lecture 4b: Outside Financing Capacity**

**Question 1:** How can “reputation” influence credit worthiness within the standard model of borrowing capacity under moral hazard.

**Question 2:** In the model of borrowing capacity under moral hazard: what is the effect of an increase in A? Why may it be that an increase in cash flow does not seem to have a significant impact on investment?

**Problem 1:** Assume an entrepreneur wants to undertake a deepening investment. The basics of the original contract are as follows (abbreviations as in the lecture slides):

I = 794,000, pH = 0.99, pL=0.79, R = 1,000,000, A = 200,000, B = 80,000.

The new investment is debt financed and yields pH’=1 and pL’=0.8 at a cost of J=20,000.

a) What is Rl and Rb in the original contract if the borrower spends A = 200,000? Demonstrate that the original contract fulfills the participation constraint of the original lender and the incentive compatibility constraint of the entrepreneur (borrower).

b) Consider the new debt contract. Will investors expect the entrepreneur to exhibit good behaviour? What is Rl’ and Rb’?

c) What would the new private benefit B’ need to be to make misbehaving an equilibrium outcome after the investment has been realized?

d) What do the original lenders expect to get and how does this compare?

**Problem 2:** A borrower who has unpaid debt and no wealth of her own seeks finance for an attractive project.

Assume the borrower still owes some initial investors a debt D and has no collateral. But she has a new project which does not need upfront equity:

pH (R – B/p) > I so that Amin < 0

Demonstrate that it is possible to win new investors for the project and that the initial investors would be willing to forgive some of the their claims. Does the size of the initial debt play a role? What if there is some collateral A?