Micro HW5

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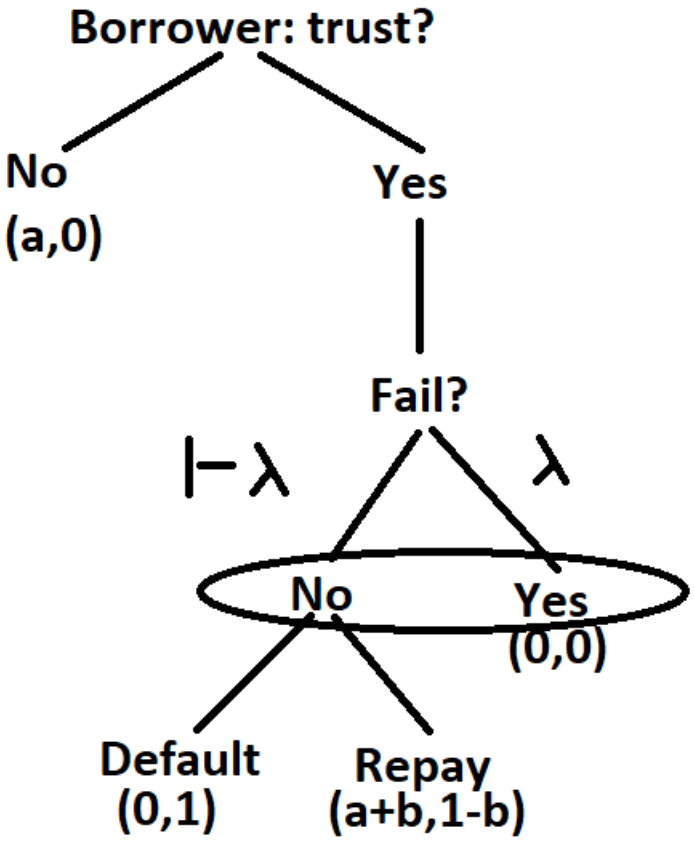
December 1, 2020

1 Question 1

Rowena will take the larger of the two pieces of cake. Therefore, Colin will always be stuck with the smaller of the two pieces of cake. Colin, therefore, will maximize his utility by making the smallest piece of cake as large as possible. The largest that the smallest piece of cake can be is half the size of the cake, lest it becomes the largest piece of cake. Therefore, Colin will split the cake exactly in half, and Rowena will take either of the two evenly sized slices.

*I worked on this assignment with my study group: Alex von Hafften, Andrew Smith, Ryan Mather, and Tyler Welch. I have also discussed problem(s) with Emily Case, Sarah Bass, and Danny Edgel.

2 Question 2



From the above game tree, we can deduce the subgame perfect equilibrium by backwards induction. If the project occurs and does not fail, then the lender does not have any reason to repay their investments. They are strictly better off by not repaying. So, they will not repay. Therefore, when the investor looks at the game tree in front of them, they see an expected utility from investing of 0, and an expected utility from not investing of a. They will choose not to invest. So, the subgame perfect equilibrium is for the investor to not invest.

3 Question 3

4 Question 4