

(IV.c) (1 point) If the firm were to hire an investment bank to guarantee firm commitment (i.e., exercise of the warrants even if out of the money) what would the fair price of such a service be? Explain.

**GROUP V (4 points)**

In the framework of Merton's model, consider the following data of company FBI: Equity has a market cap of 25 and a volatility of 35%. In 2 years' time, a loan of 240 reaches its maturity (ignore intermediate cash flows). Additionally we know that the risk-free interest rate is 2% per year (continuous time), and that the bankruptcy costs are approximately 20% of the value of the assets at liquidation.

You are told that the value of FBI's Assets follows a binomial model, for which we have the following information:

TODAY	Year 1	Year 2
255.6016	264.6929	y
	x	255.6016
		z

(V.a) (1 point) Fill in the tree of the value of the assets. Explain your steps.

(V.b) (3 points) Is it credible to you that the Tree for the Value of the Assets of company FBI is the one in the previous table? Show your computations and explain your answer.

(II.c) (1.25 points) Assuming the company chooses to use the capital structure of question (II.a), what is the debt capacity of the project throughout its life? Explain.

(II.d) (1.25 points) Suppose that the company chooses to finance the project with a loan of 400, reimbursed at the end of 2 years, and with constant annual interest payments of 3% during 2 years. If the personal tax rate on equity income is 15% and the personal tax rate on interest income is 25%, how do you estimate the present value of the interest tax shield in this case? Explain.