Assume Hoops Inc. has outstanding debt that matures for $5,000,000 six years from today.

a. Sketch a graph of the potential payoffs on Hoops stock as a function of the value of the firm’s assets three years from today. Show the specific payoffs if the value of the firm’s assets equal $4,000,000 and $7,000,000 three years from today. Clearly label and identify each payoff.

b. From the perspective of viewing Hoops’ risky bonds as equivalent to a portfolio of options and owning the firm’s assets, sketch the payoffs on the portfolio, owning the firm’s assets, and the options if Hoops’ assets end up being worth $4,000,000 and $7,000,000 three years from today. Clearly label and identify each payoff.

c. Assume that due to a covenant violation, the amount owed bondholders in six years jumps to $6,000,000. Explain in terms of options how this drop in the value of Hoops’ assets affects the value of the firm’s outstanding stock and bonds.

Wall Street Journal Questions are on the back of this page.