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.

