Bowl Bound 3 Inc. is considering whether to build a new plant today at a cost of $50 million. There is a 65% chance that the plant will generate net cash flows of $10 million per year for 25 years and a 35% chance that the factory will generate net cash flows of $7 million per year for 8 years. In both cases, net cash flows would begin a year from today. However, rather than building today, Bowl Bound could wait a year to determine the size of the market for its product and thus will know whether net cash flows from the plant will equal $10 million per year or $7 million per year. If net cash flows equal $10 per year, then the net present value in one year will equal +$55 million; and if net cash flows equal $7 million per year, the net present value in one year will equal −$15 million. Assume the cost of capital for the project equals 8%.

a. Sketch a decision tree of this capital budgeting decision.
b. Set up the calculations needed to determine the expected net present value today if Bowl Bound waits to build. How would you make a decision about whether to build today?

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