information is not favorable, the probability of a successful store is only 0.2. Without any information, Sue estimates that the probability of a successful store will be 0.6. A successful store will give a return of $100,000. If the store is built but is not successful, Sue will see a loss of $80,000. Of course, she could always decide not to build the retail store.

(a) What do you recommend?

(b) What impact would a 0.7 probability of obtaining favorable information have on Sue's decision? The probability of obtaining unfavorable information would be 0.3.

(c) Sue believes that the probabilities of a successful and an unsuccessful retail store given favorable information might be 0.8 and 0.2, respectively, instead of 0.9 and 0.1, respectively. What impact, if any, would this have on Sue's decision and the best EMV?

(d) Sue had to pay $20,000 to get information. Would her decision change if the cost of the information increased to $30,000?

(e) Using the data in this problem and the following utility table, compute the expected utility. Is this the curve of a risk seeker or a risk avoider?

MONETARY VALUE	UTILITY
$100,000	1
$80,000	0.4
$0	0.2
–$20,000	0.1
–$80,000	0.05
–$100,000	0

(f) Compute the expected utility given the following utility table. Does this utility table represent a risk seeker or a risk avoider?

MONETARY VALUE	UTILITY
$100,000	1
$80,000	0.9
$0	0.8
–$20,000	0.6
–$80,000	0.4
–$100,000	0

Internet Homework Problems

See our Internet home page, at www.pearsonhighered.com/render, for additional homework problems, Problems 3–53 to 3–58.

Case Study

Starting Right Corporation

After watching a movie about a young woman who quit a successful corporate career to start her own baby food company, Julia Day decided that she wanted to do the same. In the movie, the baby food company was very successful. Julia knew, however, that it is much easier to make a movie about a successful woman starting her own company than to actually do it. The product had to be of the highest quality, and Julia had to get the best people involved to launch the new company. Julia resigned from her job and launched her new company—Starting Right.

Julia decided to target the upper end of the baby food market by producing baby food that contained no preservatives but had a great taste. Although the price would be slightly higher than for existing baby food, Julia believed that parents would be willing to pay more for a high-quality baby food. Instead of putting baby food in jars, which would require preservatives to stabilize the food, Julia decided to try a new approach. The baby food would be frozen. This would allow for natural ingredients, no preservatives, and outstanding nutrition.

Getting good people to work for the new company was also important. Julia decided to find people with experience in finance, marketing, and production to get involved with Starting Right. With her enthusiasm and charisma, Julia was able to find such a group. Their first step was to develop prototypes of the new frozen baby food and to perform a small pilot test of the new product. The pilot test received rave reviews.

The final key to getting the young company off to a good start was to raise funds. Three options were considered: corporate bonds, preferred stock, and common stock. Julia decided that each investment should be in blocks of $30,000. Furthermore, each investor should have an annual income of at least $40,000 and a net worth of $100,000 to be eligible to invest in Starting Right. Corporate bonds would return 13% per year for the next five years. Julia furthermore guaranteed that investors in the corporate bonds would get at least $20,000 back at the end of five years. Investors in preferred stock should see their initial investment increase by a factor of 4 with a good market or see the investment worth only half of the initial investment with an unfavorable market. The common stock had the greatest potential. The initial investment was expected to increase by a factor of 8 with a good market, but investors would lose everything if the market was unfavorable. During the next five years, it was expected that inflation would increase by a factor of 4.5% each year.

Discussion Questions

1. Sue Pansky, a retired elementary school teacher, is considering investing in Starting Right. She is very conservative and is a risk avoider. What do you recommend?
2. Ray Cahn, who is currently a commodities broker, is also considering an investment, although he believes that there is only an 11% chance of success. What do you recommend?
3. Lila Battle has decided to invest in Starting Right. While she believes that Julia has a good chance of being successful, Lila is a risk avoider and very conservative. What is your advice to Lila?
4. George Yates believes that there is an equally likely chance for success. What is your recommendation?
5. Peter Metarko is extremely optimistic about the market for the new baby food. What is your advice for Pete?
6. Julia Day has been told that developing the legal documents for each fundraising alternative is expensive. Julia would like to offer alternatives for both risk-averse and risk-seeking investors. Can Julia delete one of the financial alternatives and still offer investment choices for risk seekers and risk avoiders?

Case Study

Blake Electronics

In 1979, Steve Blake founded Blake Electronics in Long Beach, California, to manufacture resistors, capacitors, inductors, and other electronic components. During the Vietnam War, Steve was a radio operator, and it was during this time that he became proficient at repairing radios and other communications equipment. Steve viewed his four-year experience with the army with mixed feelings. He hated army life, but this experience gave him the confidence and the initiative to start his own electronics firm.

Over the years, Steve kept the business relatively unchanged. By 1992, total annual sales were in excess of $2 million. In 1996, Steve's son, Jim, joined the company after finishing high school and two years of courses in electronics at Long Beach Community College. Jim was always aggressive in high school athletics, and he became even more aggressive as general sales manager of Blake Electronics. This aggressiveness bothered Steve, who was more conservative. Jim would make deals to supply companies with electronic components before he bothered to find out if Blake Electronics had the ability or capacity to produce the components. On several occasions this behavior caused the company some embarrassing moments when Blake Electronics was unable to produce the electronic components for companies with which Jim had made deals.

In 2000, Jim started to go after government contracts for electronic components. By 2002, total annual sales had increased to more than $10 million, and the number of employees exceeded 200. Many of these employees were electronic specialists and graduates of electrical engineering programs from top colleges and universities. But Jim's tendency to stretch Blake Electronics to contracts continued as well, and by 2007, Blake Electronics had a reputation with government agencies as a company that could not deliver what it promised. Almost overnight, government contracts stopped, and Blake Electronics was left with an idle workforce and unused manufacturing equipment. This high overhead started to melt away profits, and in 2009, Blake Electronics was faced with the possibility of sustaining a loss for the first time in its history.

In 2010, Steve decided to look at the possibility of manufacturing electronic components for home use. Although this was a totally new market for Blake Electronics, Steve was convinced that this was the only way to keep Blake Electronics from dipping into the red. The research team at Blake Electronics was given the task of developing new electronic devices for home use. The first idea from the research team was the Master Control Center. The basic components for this system are shown in Figure 3.15.

FIGURE 3.15
Master Control Center