

EXERCISES

- 13-1 A representative of a reputable financial services company has approached you as manager of a four-person group of anesthesiologists with an opportunity to purchase a 10-year annuity due for each member of the group. The annuity due would pay \$40,000 each year beginning 5 years from now (i.e., at time = 5). What is the most you would be willing to pay now, per each physician, for this investment? Assume an appropriate discount rate of 7%.
- 13-2 The hospital's marketing and finance departments have just provided you, as chief financial officer, with pro forma income statements for your proposed sonogram center. These statements appear in the following.

Pro forma Income Statement
(000)

Time	$t + 1$	$t + 2$	$t + 3$	$t + 4$
Service Revenues (net)	\$425	\$500	\$580	\$700
Expenses	\$400	\$450	\$525	\$600
Depreciation Expense	\$ 35	\$ 35	\$ 35	\$ 35
Net Income	(\$ 10)	\$ 15	\$ 20	\$ 65

What is the project's IRR? Assume an initial investment of \$175,000 and an appropriate discount rate of 6%. The hospital is operated as a not-for-profit facility.

- 13-3 The chief operating officer (COO) of a small, not-for-profit community hospital has to make a recommendation to the board of trustees on choosing among three project options for an unrestricted gift of \$250,000 that has just been received. The board has established a time horizon of 5 years on this project. The options are described in the following.
- Purchase a 5-year treasury note at an interest rate (annual) of 7%.
 - Purchase the practice of a young physician (the hospital's third highest admitter). Estimates of projected cash flows for the practice (post-purchase), are:

Probability of Cash Flow

Time	60%	20%	20%
$t + 1$	\$ 40,000	\$20,000	\$ 60,000
$t + 2$	\$ 60,000	\$30,000	\$ 80,000
$t + 3$	\$ 75,000	\$40,000	\$100,000
$t + 4$	\$100,000	\$50,000	\$125,000
$t + 5$	\$100,000	\$50,000	\$125,000