Antivirus Inc. expects its sales next year to be $2,500,000. Inventory and accounts receivable will increase $480,000 to accommodate this sales level. The company has a steady profit margin of 15 percent with a 35 percent dividend payout. How much external financing will the firm have to seek? Assume there is no increase in liabilities other than that which will occur with the external financing.

Intermediate Problems

9. Sauer Food Company has decided to buy a new computer system with an expected life of three years. The cost is $150,000. The company can borrow $150,000 for three years at 10 percent annual interest or for one year at 8 percent annual interest.

How much would Sauer Food Company save in interest over the three-year life of the computer system if the one-year loan is utilized and the loan is rolled over (reborrowed) each year at the same 8 percent rate? Compare this to the 10 percent three-year loan. What if interest rates on the 8 percent loan go up to 13 percent in year 2 and 18 percent in year 3? What would be the total interest cost compared to the 10 percent, three-year loan?

10 Assume that Hogan Surgical Instruments Co. has

15. Lear Inc. has $840,000 in current assets, $370,000 of which are considered permanent current assets. In addition, the firm has $640,000 invested in fixed assets.

a. Lear wishes to finance all fixed assets and half of its permanent current assets with long-term financing costing 8 percent. The balance will be financed with short-term financing, which currently costs 7 percent. Lear's earnings before interest and taxes are $240,000. Determine Lear's earnings after taxes under this financing plan. The tax rate is 30 percent.

b. As an alternative, Lear might wish to finance all fixed assets and permanent current assets plus half of its temporary current assets with long-term financing and the balance with short-term financing. The same interest rates apply as in part *a*. Earnings before interest and taxes will be $240,000. What will be Lear's earnings after taxes? The tax rate is 30 percent.

c. What are some of the risks and cost considerations associated with each of these alternative financing strategies?

Basic Problems

1. City Farm Insurance has collection centers across the country to speed up collections. The company also makes its disbursements from remote disbursement centers so the firm's checks will take longer to clear the bank. Collection time has been reduced by two days and disbursement time increased by one day because of these policies. Excess funds are being invested in short-term instruments yielding 12 percent per annum.

   a. If City Farm has $5 million per day in collections and $3 million per day in disbursements, how many dollars has the cash management system freed up?

   b. How much can City Farm earn in dollars per year on short-term investments made possible by the freed-up cash?

2. Neon Light Company of Kansas City, which has a

13. Fisk Corporation is trying to improve its inventory control system and has installed an online computer at its retail stores. Fisk anticipates sales of 49,000 units per year, an ordering cost of $8 per order, and carrying costs of $1.60 per unit.

a. What is the economic ordering quantity?

b. How many orders will be placed during the year?

c. What will the average inventory be?

d. What is the total cost of ordering and carrying inventory?

18. Henderson Office Supply is considering a more liberal credit policy to increase sales, but expects that 9 percent of the new accounts will be uncollectible. Collection costs are 6 percent of new sales, production and selling costs are 74 percent, and accounts receivable turnover is four times. Assume income taxes of 20 percent and an increase in sales of $65,000. No other asset buildup will be required to service the new accounts.

a. What is the level of accounts receivable to support this sales expansion?

b. What would be Henderson's incremental aftertax return on investment?

c. Should Henderson liberalize credit if a 16 percent aftertax return on investment is required?

Assume that Henderson also needs to increase its level of inventory to support new sales and that inventory turnover is two times.

d. What would be the total incremental investment in accounts receivable and inventory to support a $65,000 increase in sales?

e. Given the income determined in part *b* and the investment determined in part *d,* should Henderson extend more liberal credit terms?