

PROBLEM 3-26 Changes in Cost Structure; Break-Even Analysis; Operating Leverage; Margin of Safety [LO 3-4, LO 3-6, LO 3-7, LO 3-8]

Frieden Company's contribution format income statement for the most recent month is given below:

Sales (40,000 units)	\$800,000
Variable expenses	560,000
Contribution margin	240,000
Fixed expenses	192,000
Net operating income	<u>\$ 48,000</u>

The industry in which Frieden Company operates is quite sensitive to cyclical movements in the economy. Thus, profits vary considerably from year to year according to general economic conditions. The company has a large amount of unused capacity and is studying ways of improving profits.

Required:

1. New equipment has come on the market that would allow Frieden Company to automate a portion of its operations. Variable expenses would be reduced by \$6 per unit. However, fixed expenses would increase to a total of \$432,000 each month. Prepare two contribution format income statements, one showing present operations and one showing how operations would appear if the new equipment is purchased. Show an Amount column, a Per Unit column, and a Percent column on each statement. Do not show percentages for the fixed expenses.
2. Refer to the income statements in (1) above. For both present operations and the proposed new operations, compute (a) the degree of operating leverage, (b) the break-even point in dollars, and (c) the margin of safety in both dollar and percentage terms.
3. Refer again to the data in (1) above. As a manager, what factor would be paramount in your mind in deciding whether to purchase the new equipment? (Assume that ample funds are available to make the purchase.)
4. Refer to the original data. Rather than purchase new equipment, the marketing manager argues that the company's marketing strategy should be changed. Instead of paying sales commissions, which are included in variable expenses, the marketing manager suggests that salespersons be paid fixed salaries and that the company invest heavily in advertising. The marketing manager claims that this new approach would increase unit sales by 50% without any change in selling price; the company's new monthly fixed expenses would be \$240,000; and its net operating income would increase by 25%. Compute the break-even point in dollar sales for the company under the new marketing strategy. Do you agree with the marketing manager's proposal?