

What is Margin of Safety?

Worksheet

Margin of Safety = Actual (or Budgeted) Sales Break-even Sales. As a ratio, it shows the percentage sales can drop before a company hits a loss.

$$\text{MOS} = \frac{\text{ES} - \text{BES}}{\text{ES}} \times 100\%$$

Questions

- Actual sales are \$200,000 and break-even sales are \$150,000. What is the margin of safety in dollars?
A) \$350,000
B) \$50,000
C) \$150,000
D) \$200,000
- Using the same numbers, what is the margin of safety ratio?
A) 75%
B) 25%
C) 33%
D) 50%
- A higher margin of safety generally means
A) Higher risk of loss
B) Lower risk from sales declines
C) Lower profit always
D) Higher fixed costs
- If actual sales equal break-even sales, the margin of safety is
A) 100%
B) 50%
C) 0
D) Negative
- A company has actual sales of \$100,000 and a break-even point of \$70,000. Find the margin of safety and its ratio.
- A firm budgets sales of \$250,000 against a break-even of \$200,000. What is its margin of safety ratio?
- Break-even is 500 units, the company sells 650 units at \$50 each. Find the margin of safety in dollars and as a ratio.
- Define: What does margin of safety measure?
- Define: Margin of safety formula?
- Define: What does a low margin of safety indicate?

Answer Key

1. B) $\$50,000 - \text{MOS} = 200,000 - 150,000 = \$50,000$.
2. B) $25\% - \text{MOS Ratio} = 50,000 / 200,000 = 25\%$.
3. B) Lower risk from sales declines - A bigger cushion above break-even means the business can absorb a bigger sales drop without a loss.
4. C) 0 - At break-even, $\text{MOS} = \text{Sales} - \text{Break-even} = 0$.
5. $\text{MOS} = 100,000 - 70,000 = \$30,000$ $\text{MOS Ratio} = 30,000 / 100,000 = 0.30 = 30\%$
6. $\text{MOS} = 250,000 - 200,000 = \$50,000$ $\text{MOS Ratio} = 50,000 / 250,000 = 0.20 = 20\%$
7. $\text{MOS units} = 650 - 500 = 150$ units $\text{MOS } \$ = 150 \times \$50 = \$7,500$ $\text{Actual sales} = 650 \times \$50 = \$32,500$ $\text{MOS Ratio} = 7,500 / 32,500 = 23.08\%$
8. How much sales can fall before a company reaches its break-even point and starts losing money.
9. $\text{MOS} = \text{Actual Sales} - \text{Break-even Sales}$; $\text{MOS Ratio} = \text{MOS} / \text{Actual Sales}$.
10. High risk - even a small sales drop can push the company into a loss.

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