Assingment #4 - Break-even analysis, operating leverage

The company produces one type of product. Below is the information about costs and revenues achieved during the year with the standard mode of production.

Option No. 1

	[€]	**Cost per unit** [€]
Sales revenue (S) [50 000 units x €200,0	**10 000 000,0**	200,0
Raw materials (V)	4 200 000,0	
Labour cost (V)	1 400 000,0	28,0
Labour cost (F)	1 000 000,0	
External services (V)	900 000,0	18,0
External services (F)	200 000,0	
Other costs (V)	100 000,0	2,0
Other costs (F)	600 000,0	
Depreciation	600 000,0	
Financial costs - excluding Interest (V)	200 000,0	4,0
Other fixed costs (F)	200 000,0	
Total costs	**9 400 000,0**	
Operation profit (EBIT)	600 000,0	
Financial costs)	0,0	
Gross profit(EBT)	600 000,0	
Tax (CIT)	11 000,0	
Net profit (EAT)	589 000,0	

(V) - variable cost; (F) - fixed cost

In the option no. 1, the company is funded solely by equity capital amounting to € 2,250,000.0.
The company's management is not satisfied with the level of profits achieved and would like to introduce actions to increase its efficiency. Two alternative options are being analysed:

Option No. 2

- purchase of a new machine, which will save 15% of variable personnel costs but increase raw material consumption by 2%; a loan of €1,500,000 will be needed to purchase the machine; non-interest expenses (V) will increase by 20%, and interest costs will amount to €60,000.0.
- the company's equity will decrease by €450,000.0
- CIT: €70,000.0

Option No. 3

- reduction of the selling price by 12%, allowing an increase in the number of products sold by 20%, but additional fixed promotion costs (F) will be incurred (€250,000.0 per year)
- the company will take out a revolving loan of €1,000,000.0 resulting in a 10% increase in non-interest costs (V) and the emergence of interest costs amounting to €40,000.0
- equity will amount to €2,000,000.0
- CIT: €90,000.0

Using break-even analysis, calculating quantitative and value break-even points, safety margin, operating leverage, financial leverage, and return on equity ratio, analyse the options and determine which one in your opinion, will be most effective from the company's management perspective.