

Ex. Ford foundation is considering donating \$15 million for teaching math and engineering to high school students. Grant will extend over 10 years, and will save \$1.5 million/year in salaries and expenses. However, \$200 K year will be removed from other payment funding. M&O costs are \$500 K. Ford foundation's MARR is 6%.

Find B/C ratio based on AW

$$\text{AW investment cost} = 15,000 (A/P, 6\%, 10) = \$2,038,050 \text{K}$$

$$\text{AW benefits} = \$1,500 \text{K}$$

$$\text{AW disbenefits} = \$200 \text{K}$$

$$\text{AW M\&O costs} = \$500 \text{K}$$

$$\text{Conventional B/C ratio, } \frac{1,500 - 200}{2,038.050 + 500} = 0.51$$

$B/C < 1 \Rightarrow$ do not take project

$$\text{Modified B/C ratio, } \frac{1,500 - 200 - 500}{2,038.050} = 0.39$$