



UNIVERSITY OF THE PEOPLE

BUS 4404-01 PRINCIPLES OF FINANCE 2 - AY2024-T3

WRITTEN ASSIGNMENT UNIT 6

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To calculate WACC before new bonds:

$$\text{Total capital before new bonds} = 15 + 10 + 75 = 100$$

$$\text{Debt weightage} = 15/100 = 15\%$$

$$\text{Equity weightage} = 75/100 = 75\%$$

$$\text{Preferred stock} = (3.80/50) * 100 = 7.6\%$$

$$\text{WACC} = [6.5\% (1-30\%) * 15/100] + [7.6\%*(10/100)] + [12\%*(75/100)]$$

$$\text{WACC} = .6825\% + .76\% + 9\%$$

$$\text{WACC} = 10.44\%$$

To calculate WACC after new bonds:

$$\text{Cost of new debt after tax} = 7.5\% * (1 - 0.3) = 5.25\%$$

$$\text{Weight of total debt} = (\$15\text{M} + \$10\text{M}) / (\$15\text{M} + \$10\text{M} + \$10\text{M} + \$75\text{M}) = 22.7\%$$

$$\text{Weight of preferred stock} = \$10\text{M} / (\$25\text{M} + \$10\text{M} + \$75\text{M}) = 8.5\%$$

$$\text{Weight of equity} = \$75\text{M} / (\$25\text{M} + \$10\text{M} + \$75\text{M}) = 67.0\%$$

$$\text{WACC after} = (5.25\% * 22.7\%) + (7.6\% * 8.5\%) + (12\% * 67.0\%)$$

$$\text{WACC} = 9.9\%$$

So, the weighted average cost of capital:

Before new bonds = 10.44 %

After new bonds = 9.9%