

A Simple Model

Weighted Average Cost of Capital

NOTES TO ACCOMPANY VIDEOS

These notes are intended to supplement the videos on ASimpleModel.com. They are not to be used as stand-alone study aids, and are not written as comprehensive overviews of the topic detailed. The purpose of these notes is to provide a tangible collection of the visuals used in the videos with comments highlighting the more important aspects covered.

Discounted Cash Flow Model

• — 004 Weighted Average Cost of Capital

This video introduces the weighted average cost of capital ("WACC"), and walks through the calculation.

Weighted Average Cost of Capital

WEIGHTED AVERAGE COST OF CAPITAL (WACC)

Weighted Average Cost of Capital

Cost of Equity	
Risk Free Rate	3.0%
Expected Market Return	11.0%
Beta	1.5
Cost of Equity	15.00%
E / (D+E)	70.0%

Cost of Debt	
Cost of Debt	8.0%
Tax Rate	35.0%
After Tax Cost of Debt	5.2%
D / (D+E)	30.0%

NOTES:

Discounted Cash Flow Model

• — 004 Weighted Average Cost of Capital

For your review, the definitions used in the video to describe the components of the WACC are provided below:

Weighted Average Cost of Capital (WACC)

$$WACC = \frac{E}{E+D} * (\text{cost of equity}) + \frac{D}{E+D} * (\text{cost of debt}) * (1-T)$$

E = market value of the company's equity

D = market value of the company's debt

Percentage of capital structure that is E or D

$$WACC = \frac{E}{E+D} * (\text{cost of equity}) + \frac{D}{E+D} * (\text{cost of debt}) * (1-T)$$

Cost of Equity = (risk-free return) + β * (risk premium)

- Risk-free rate of return: govt. bond yield

- β : measure of volatility in relation to expected market return

- Risk premium: (expected market return) - (risk-free rate)

- Expected market return: the expected return for a security (S&P 500)

$$WACC = \frac{E}{E+D} * (\text{cost of equity}) + \frac{D}{E+D} * (\text{cost of debt}) * (1-T)$$

Tax shields must be incorporated into calculation:

- Financing-related tax shields not included in FCF