A Simple Model

Weighted Average Cost of Capital

Discounted Cash Flow Model

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	**12.1%**		

Cost of Equity		Cost of Debt	
Risk Free Rate	3.0%	Cost of Debt	8.0%
Expected Market Return	11.0%	Tax Rate	35.0%
Beta	1.5	After Tax Cost of Debt	5.2%
Cost of Equity	15.00%		
E / (D+E)	70.0%	D / (D+E)	30.0%

NOTES:

A Simple Model

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)

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

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

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

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)

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

Tax shields must be incorporated into calculation:

- Financing-related tax shields not included in FCF