PAYLINK

WEIGHTED COST OF CAPITAL



Weighted Average Cost of Capital (WACC) represents a company's blended cost of capital across all sources, including common shares, preferred shares, and debt (loans/bonds). The cost of each type of capital is weighted by its percentage of total capital and they are added together. The purpose of WACC is to determine the cost of each part of the company's capital structure based on the proportion of equity, debt, and preferred stock it has.

The Weighted Average Cost of Capital is a formula that can be used to gain an insight into how much interest a company owes for each dollar it finances. Another way to look at Weighted Cost of Capital is it is a measure of the rate a company pays to finance their operations.

Many companies use the interest rate that is being paid on existing loans or lines of credit as the Weighted Cost of Capital. Using just the interest rate being assessed on existing debt provides a very narrow, and many times misleading representation of the actual cost of capital. Taking a holistic approach by blending the cost of capital across all sources provides a more accurate and realistic cost for capital, giving management better insight on what the actual costs to the company are and the ability to make more informed and better decisions.

Companies of all sizes benefit from understanding what their respective Weighted Cost of Capital is. For publicly traded companies, computing the WACC is straightforward based on the published financials for the company. Privately help companies is somewhat subjective based on the equity value assigned and used in the calculation, dividends (distributions paid per share/owner draws, etc.). Obviously, the more accurate the data, the more accurate the calculation for WACC will be, allowing for better decision making by the company.

WEIGHTED AVERAGE COST OF CAPITAL FORMULA

$$WACC = \left(\frac{E}{V} \times Re\right) + \left(\frac{D}{V} \times Rd \times (1 - Tc)\right)$$

- **E** = market value of the firm's equity
- **D** = market value of the firm's debt
- **Tc** = coroporate tax rate
- **Re** = cost of equity
- **Rd** = cost of debt
- **V** = E + D



In essence, you first establish the cost of debt and the cost of equity. Then you multiply each of those by their proportionate weight of market value. Add those two figures together and multiply the result by the business's corporate tax rate.

A more complicated formula can be applied in the event that the company has preferred shares of stock, which are valued differently than common shares because they typically pay out fixed dividends on a regular schedule.

Note:
A high WACC indicates that a company is spending a relatively large amount of money to raise capital.

Example of WACC:
Let's say a company has $3 million of market value in equity and $2 million in debt, making its total capitalization $5 million. Its tax rate is 21%, its cost of equity is 9% (no growth rate in dividends projected), and its cost of debt is 6%.

That means:

- E = $3,000,000
- D = $2,000,000
- Tc = 21%
- Re = 9%
- Rd = 6%
- V = $5,000,000



Calculating the weighted cost of capital is then just a matter of plugging those numbers into the formula:

- WACC = (E÷V x Re) + (D÷V x Rd x (1-Tc))
- WACC = ($3,000,000/ $5,000,000 x 0.09) + ($2,000,000/$5,000,000 x 0.06 x (1-0.21))
- WACC = (0.054) + (0.019) = 0.073
- WACC = 7.3%

While it helps to know the formula to get a better understanding of how WACC works, below is a WACC Calculator we have put together that can be used to calculate WACC.

	Company Inputs	Formula Code	Description
Debt (Total Liabilities)	**$2,000,000**	D	
Stock Price	**$30.00**		
Outstanding shares	**$100,000**		
Equity	$3,000,000	E	Stock Price x Outstanding shares
Debt + Equity	$5,000,000	v	Debt + Equity
Interest Expense	**$152,000**		
Cost of Debt	6.00%	Rd	(Interest Expense / Total of all Debts) x (1-Tax Rate)
Dividend per Share	**$2.70**		
Growth Rate of Dividends	0.00%		4 yr growth rate total / 4
Cost of Euity	9.00%	Re	(Dividends per share / Current Market Value of Stock) + Growth Rate of Dividends
Corporate Tax Rate	**21.00%**	Tc	
% of finance that is equity	60.00%		Equity / (Debts + Equity)
% of finance that is debt	40.00%		Debt / (Debts + Equity)
WACC	**7.30%**		(% of finance that is equity x cost of equity) + (% of finance that is debt x cost of debt) x (1-Tax Rate)

Projected Dividend		
Year	Dividend	Growth
1	**$2.70**	Rate
2	**$2.70**	0.00%
3	**$2.70**	0.00%
4	**$2.70**	0.00%
5		0.00%

Understanding the WACC for a company is a valuable tool to utilize when making decisions on expansions, acquisitions etc. for the company. Considering the cost of all capital for all sources allows management to make much more accurate and informed decisions.