Indé Global
Business Appraisers

Valuation updates | Building blocks of WACC

May 2016

This thought leadership paper provides insights on the concept of WACC in valuation.

The income approach is one of the common ways of determining the value of a business by considering expected returns on an investment, which are then discounted at an appropriate rate of return to reflect the risks and potential rewards associated therewith. The measurement is based on the value indicated by current market expectations about those future amounts. To determine the value of current market expectations, one needs to discount each year's forecast of cash flows for time and risk.

The level of cash flows to be discounted depends upon the purpose of valuation. An enterprise valuation requires cash flows available to all stakeholders' of the company (equity and debtholders) to be discounted to present value, while an equity valuation required cash flows available to only equity holders to be discounted to present value. The discount factor must represent the risk faced by the investors who has the right over the subject cash flows. For of an enterprise valuation, the discounted factor is represented by the weighted average cost of capital ("WACC"), whereas for any equity valuation, the discount factor is represented by cost of equity ("Ke")

The WACC blends the rates of return required by all investor capital i.e. debt holders as well as equity holders. For a company financed solely with debt and equity, the WACC is defined as follows:

WACC =Wd * kd (1 − t) + We * ke

- Wd= Weight of debt component in the total capital structure of the subject company.
- Kd= Cost of debt (Basically the rate at which the subject company can currently borrow, it reflects not only default risk but also the level of interest rate in the market)
- We = Weight of equity component in the total capital structure of the subject company.
- Ke = Cost of equity (Basically the return which the equity investors expects to compensate for the risk taken by investing their capital)
- t = Tax rate

The cost of equity is the rate of return that investors require to make an equity investment in a firm. There are two approaches to estimating the cost of equity;

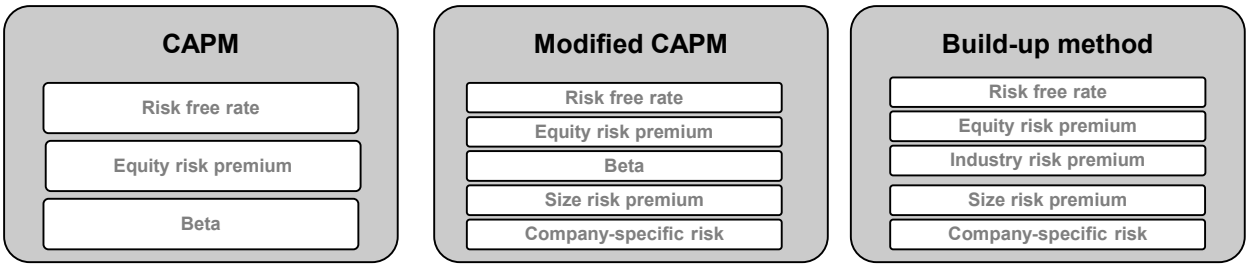
- a dividend-growth model.
- a risk and return model

The dividend growth model (which specifies the cost of equity to be the sum of the dividend yield and the expected growth in earnings) is based upon the premise that the current price is equal to the value. It cannot be used in valuation, if the objective is to find out if an asset is appropriately valued.

Under risk and return model, the cost of equity is derived using a build-up method and Modified CAPM method. The basic building blocks for the build-up and the modified CAPM are:

- Risk free rate ("Rf")
- Equity risk premium ("RPm")
- Beta ("β") (in CAPM)
- Industry risk premium ("RPi") (in build-up method)
- Size risk premium ("RPs") and
- Company specific risk premium ("RPc")

The following chart summarises the various approaches in risk and return model:



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Building blocks of WACC

The basic building blocks of WACC are summarised as follows:

Risk free rate (Rf)	• The risk free rate of return includes the investors' required rate of return for the riskless use of their funds and a factor of inflation. • The risk-free rate is the rate available on instruments considered to have virtually no possibility of default and thus the rate of return on a long term sovereign bond is considered a good proxy for the risk free rate of return.
Equity risk premium (RPm)	• The equity risk premium is the extra return that investors demand in excess of the risk free rate to compensate them for investing in a diversified portfolio of large common stocks rather than investing in risk free securities. • It represents additional risk, or the degree of uncertainty, that the expected future equity returns will not be realized. • It is a forward-looking concept in that the discount rate should reflect what investors think the risk premium will be going forward.
Beta (β)	• Beta is a measure of systematic risk of a stock, the tendency of a stock's price to correlate with changes in the market. • It is used as a modifier to the ERP in the context of the CAPM. • Beta is a sole measure of equity capital of the pure CAPM and refers to the volatility of a security or portfolio relative to the market.
Industry risk premium (RPi)	• The industry risk premium is one of the components used while estimating cost of equity under the build-up method • The industry risk premium measures how risky the industry is in relation to the market as a whole. • In other words, it is a special form of beta that has been adjusted so that it can be employed as a simple up or down adjustment in estimating the cost of capital.
Size risk premium (RPs)	• The size risk premium compensates for the size effect which is based on the empirical observation that companies of small size are associated with greater risk and therefore have a greater cost of capital. • The size risk premium represents the difference between the actual historical excess return and the excess return predicted by beta.
Company specific risk premium (RPc)	• The company specific risk premium is an unsystematic risk (risk that can be diversified) specific to a company's operation and reputation. • It depends on the judgement of the valuer based on assessment of various factors. • The factors considered for evaluating the addition of a company specific risk premium include; stability of industry in which the company operates, diversification of product lines, stability of earnings, earnings margins, financial structure, management depth and achievability of projections.

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Building blocks of WACC (contd…)

FAQs

Question: Is there any difference between WACC and the Discount rate?

Answer: It depends on what is being discounted. If one wants to know how much cash is available to all the firm's providers of capital (namely stockholders, bondholders and other claimholders) he/she would consider the WACC as the Discount rate, because WACC includes the risk component of equity as well as debt.
If one wants to know how much cash can be distributed to the equity shareholders of a company, the discount rate in this situation would be the cost of equity. The cost of equity represents the risk component of equity only.

Question: Which amongst the two, the modified CAPM or the build-up method is better?

Answer: Depending on the valuation and the company, both models may be relied upon. However, the modified CAPM is often a better model when one believes he/she has good industry comparability with guideline public company betas. If there are no reliable guideline public company betas, analysts will usually apply and rely upon the acceptable build-up model. This often happens in the valuation of small businesses.

Glossary:

- *CAPM - Capital asset pricing model*
- *WACC - Weighted average cost of capital*
- *FAQs - Frequently asked questions*

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