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Valuation updates | Discount rate - WACC

This thought leadership paper discusses the basic components of discount rate used in valuations and the building blocks of WACC.

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.

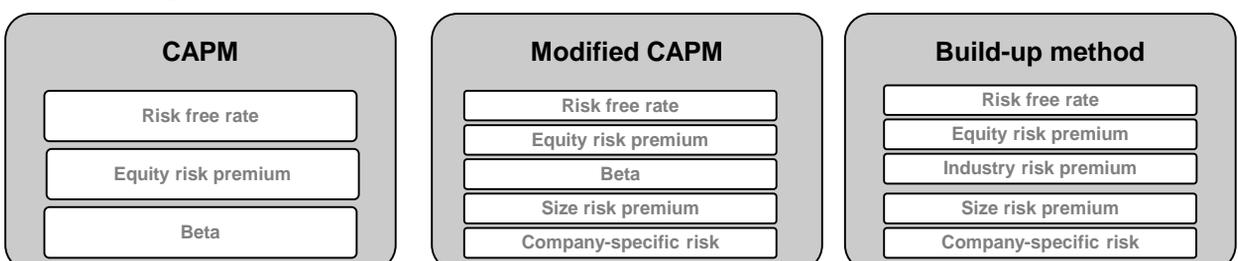
The level of cash flows to be discounted depends upon the purpose of valuation. An enterprise valuation requires cash flows available to all stakeholders' of the company (*equity and debtholders*) to be discounted to present value, while an equity valuation required cash flows available to only equity 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 following chart summarises the various approaches in risk and return model:



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.

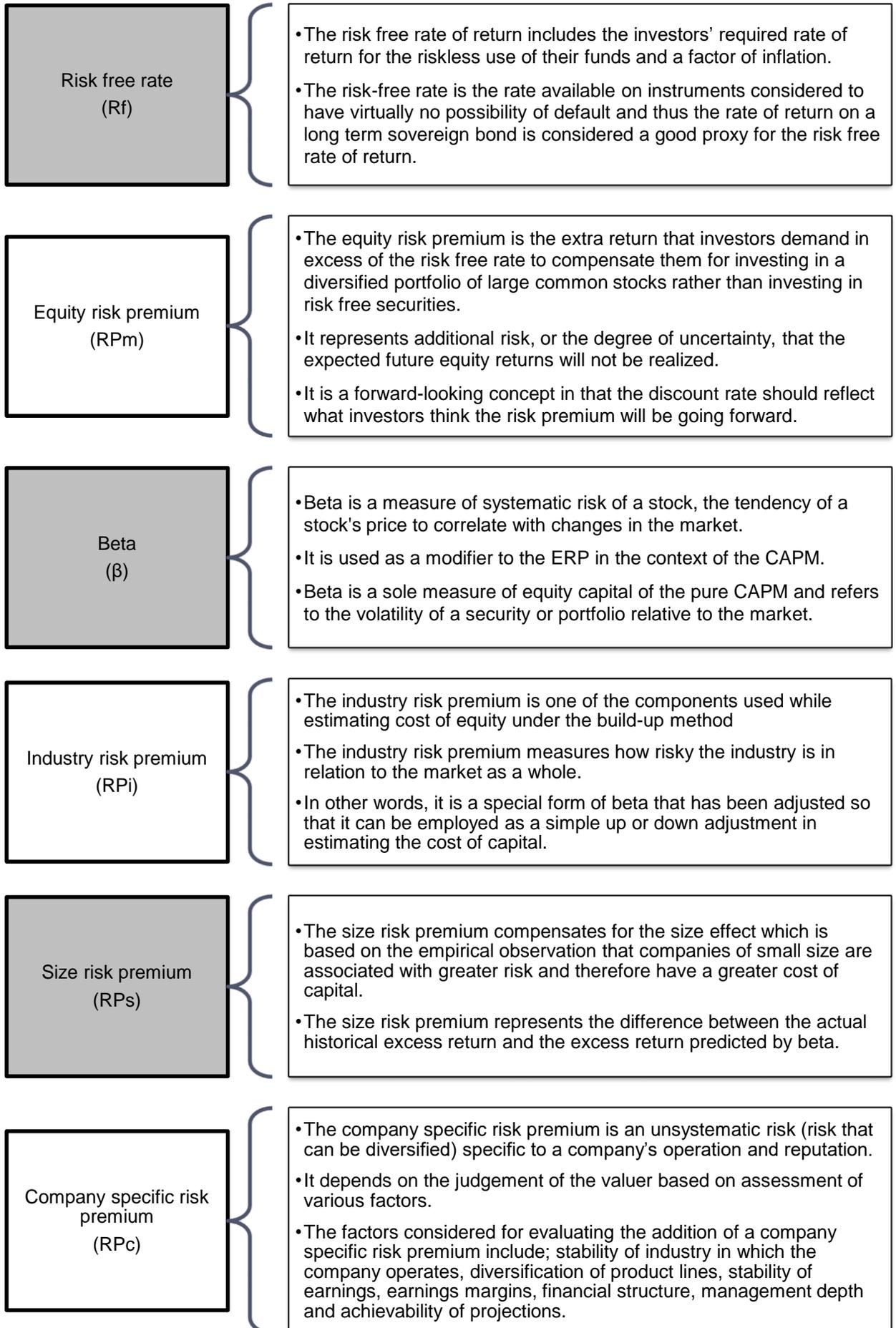
Under risk and return model, the cost of equity is derived using a build-up method and Modified CAPM method. The basic building blocks for the build-up and the modified CAPM are:

- » Risk free rate;
- » Equity risk premium;
- » Beta ("β") (in CAPM);
- » Industry risk premium (in build-up method);
- » Size risk premium; &
- » Company specific risk premium.



Building blocks of WACC

The basic building blocks of WACC are summarised as follows:



Building blocks of WACC (cont...)

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.



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

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