

## WACC & Valuation – A Different Perspective

WACC plays a key role in valuation and often will be a variable with a very high degree of sensitivity when it comes to your valuation. What does it mean? What does it represent? How is it intuitive? It seems odd that most analysts use WACC in their valuation but do not have an intuitive grasp of its significance. To our knowledge, this framework has not been presented before and from the perspective of valuation I think we can help clear up confusion and offer insight into our thought process.

If you yell ‘what is WACC!?’ in an MBA classroom you are likely to hear many things: risk free rate! equity risk premium! opportunity cost! time value of money! expectations! One of the most popular definitions is that WACC is equal to the weighted average of a company’s cost of equity and cost of debt where CAPM is used to estimate cost of equity, YTM on company debt is used for cost of debt and the weights are pulled from the market value of both debt and equity. And voila! We are done. Right? Well, it depends. This definition can serve a useful corporate finance function. When executive teams are considering making outlays and assessing ROI, understanding their cost of capital is critical to proper capital allocation. So what about WACC when it comes to valuation, can we just use this same figure and plug this into our DCF? In our opinion, absolutely not. Furthermore, it will be helpful to completely separate WACC into two very different definitions:

### Corporate Finance WACC

$WACC_{cf}$  = weighted average cost of debt and equity capital

### Valuation WACC

$WACC_v$  = the rate used in valuation exercises to discount future firm cash flows.

Although  $WACC_{cf}$  and  $WACC_v$  are somewhat correlated, if you believe like us that markets almost never price assets accurately ([Our Beliefs](#)), then it follows:

$$WACC_v \neq WACC_{cf}$$

Given our focus is on valuations and not corporate finance, let us do away with  $WACC_{cf}$  and focus solely on the latter.  $WACC_v$  is an aggregation of different concepts and made up of three independent building blocks: Time value of money, equity risk premium, and risk. We need to fully understand all three building blocks before formulating our WACC.

### Block 1 – Time Value of Money

Let us start with building block one, the time value of money. Money is worth more today than it is in the future. Very intuitive. Do you want a \$100 now or ten years from now? You want it now because, at the very minimum, you can invest that Benjamin in a risk free T-bond and generate a return on your capital. So the concept of ‘time value of money’ is inextricably linked to opportunity cost. Let us assume that the T-Bond rate is 1%. We now know, at the very minimum, our rate must be 1%. So now we understand that whatever rate we are using to discount these cash flows must be some function of the risk-free rate. Moving to block two...

## Block 2 – Equity Risk Premium

What else do you need to know? You need to estimate what a rational investor expects to make in the equity market. This is called equity risk premium (ERP). This building block is the most peculiar of them all. Why isn't it what you expect to make in the market? Because the market doesn't care what you expect to make. This concept is closely related to the famous Keynesian quote explaining the market as a beauty contest and investors are guessing what other investors are going to think about a stock as opposed to what they think themselves. This comes down to an obvious assumption underpinning valuation—that if you are correct in your valuation, the market will eventually view the security the same way you do and the market will place the same value on that security as you do. It doesn't do anyone any good to know the intrinsic value of something when the market will never converge to your price. And one of the elements that dictates whether the market will converge to your view is what the market views the opportunity cost of stocks is. Still confused? Let's use an example, let's say you discover that the narrative around XYZ is incorrect and when the market figures it out XYZ's price will appreciate 10% to converge with its intrinsic value. What if the average market participant expects to make 20% on average investing in the market? In 99', nobody cared about your dumb value stock that would yield a 10%. The NASDAQ was trading at 72 P/E! Everyone was trying to get rich by next quarter. In this environment of overconfidence and inflated expectations it can be harder for your price to converge to intrinsic value because the market just doesn't care. ERP helps to account for the expectation of market returns in our valuation. How do you estimate this? Typically, earnings yield + dividend yield is a good estimate but understand that if the market is frothy and piling into growth stocks then it is likely higher.

## Block 3 – Risk

The last building block is really where the rubber meets the road and where some money can be made by astute investors. 'Risk' is a catch all term but to put simply, it attempts to quantify the likelihood that a company experiences significant loss in future cash flows. What are the different risks that can affect a company's ability to generate cash flow? They are many and the set is never fully defined: sovereign risk can hurt a company's ability to obtain capital, industry risk can render the whole sector obsolete (picture a cab company vs. Uber) and finally idiosyncratic risk. For example, if a company is making hair brained capital investments, is significantly leveraged, and has key man/client risk this is significant idiosyncratic risk. Estimating this last block is more art than science and rules of thumb, experience and a thorough understanding of both the risks and likelihood these risks materialize will go a long way to estimate this properly. There are other creative ways of accounting for risks in calculation using tools like probability of default and scenario analysis. We prefer estimating WACC\_v and using a uniform distribution around this estimate for sensitivity analysis.

In sum, the formula for WACC\_v is:

$$\text{WACC}_v = \text{Risk Free Rate\%} + \%ERP + \text{Risk\%}$$

## Conclusion

Notice how when discussing WACC<sub>v</sub> we didn't talk at all about the interest rate cost of debt. This is because the interest rate on a company's debt is of little significance when assessing the risks linked to its future cash flow. This being said, the company's access to capital is incredibly significant to its future cash flows and if this access is hampered then WACC<sub>v</sub> should increase as a result of risk increasing.

We do not doubt that our discussion of WACC<sub>v</sub> will leave a lot of people scratching their heads and unfulfilled. This is largely because estimating WACC<sub>v</sub> is largely an art and we lose the nice precise WACC<sub>cf</sub> formula that makes us feel warm and fuzzy. Our claim is that what is lost in precision is gained in originality, enhanced critical thought, and more importantly an intuitive understanding of WACC that will lead to better valuation assessments.

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