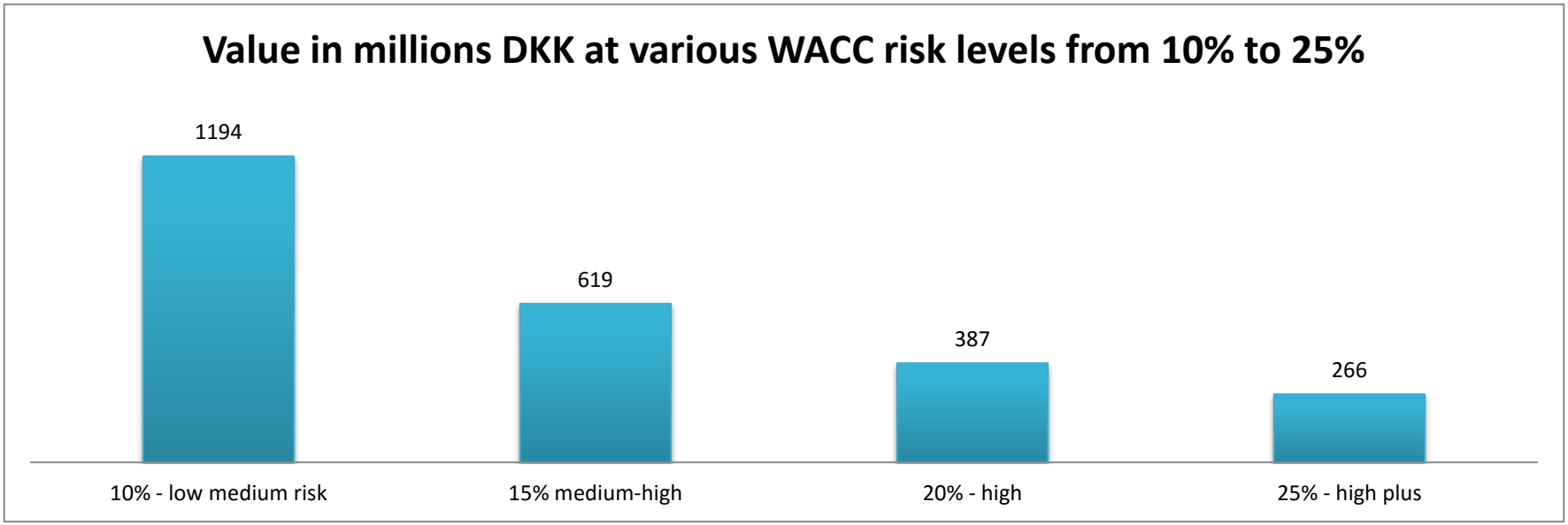
Written by NordicValuation.com and NordicValuation.dk morten@nordicvaluation.dk

Introducing the WACC RISK MATRIX

WACC is Weighted Cost Of Capital for discounting the future cashflow of companies to present value.

Tremendous harm can be done to the valuation of a Start-up (or generally for companies) if WACC is not understood using Discounted Cash flow model.
The figure below illustrates what is meant by wacc risk matrix: Influence on business value from WACC.

Figure shows sample business valuation with various WACC values.



This article is not rocket science but rather a practical solution to the overall challenge of finding the right discount rate, as well as the named cost of capital also known as WACC. I have learned, that there is absolutely not one correct WACC but a sum of all information which gives a range of WACC.
WACC is the discount rate used to calculate the present value of all future cash flows. it is the required return from investors.

The higher the risk, the higher the WACC:

An investor will require a lower rate of return on their investment if it is a company with historic performance and steady growth in sales and EBITDA, but if it is a start-up in its early stage the risks increase and an investor will require a higher return to compensate for the higher risk.

There are various stages of early start-ups - i.e., it can be a great interesting project which has just started or it can be a innovative start-up which just started or it can be an innovative start-up which has a tested product with good results, almost ready for sale.
It could also be a Start-up where targets for the first sales have been met or maybe it is even at a stage with positive EBITDA.

I have investigated many articles from Venture Capital Companies, books, professors in finance and more. No one is in full agreement.
There are lots of different opinions and approaches. What should the WACC be?
I like formulas and use many formulas like CAPM (Capital Asset Pricing Model) in the article and conclusions which in the end are twisted to fit into:
What do the VC's ad Equity firms use. It all comes down to one point: What is being used in the real world.
I have summed it all up and have come to this conclusion - Let me introduce the WACC RISK MATRIX.

WACC RISK MATRIX by NordicValuation.dk and NordicValuation.com		
Below is based on "normal" operations and not extraordinary circumstances.	**WACC**	**Risk**
Public companies normally (CAPM)	7% to 10%	low
un-listed companies but still mature with track record - "Normal" (CAPM)	9% to 13%	low-medium
Start-ups with a period of sales and positive or close to positive EBITDA	15% to 20%	medium-high
Start-ups with a innovative/high-tech product almost ready and tested positive	20% to 25%	high
Start-ups with great potential and in the first stage of development	25% to 35%	high plus
Start-ups with great potential and need funding to start the development	35% to 60%	Ultra high

As you can see, the higher risk the higher span in WACC. In the category I named ultra high, the span is from 35% all way up to 60% as at that stage it is almost impossible to see if the company will succeed or fail even though the product seems good.

Please notice, that there is a joker in the WACC RISK MATRIX. You need to be careful about the involvement of the owner in daily operations. If the operations and cash flow is deeply dependent one or more owners, the risk increase and the WACC goes further up. In such cases it will, no matter what, be important that there is a good long period where all activities are handed over in daily work by the seller. But that is another case.

I have been searching google on "wacc start-up". Reading and understanding tons of articles and statements plus examinations of the market. You can do the same, but I think I have made some pretty good conclusions here even though you might find others whose opinions differ. The "others" are those who do not listen to the market and or consider how practitioners perform valuations when buying or selling companies.

Example: WACC influence on value

The Start-up has a period with estimates on 10 years as this is the time from now until it is expected to reach a normal steady growth from its hyper growth ratio (text inspiration from McKinsey & Co. books and articles)

Using a WACC at 15%, the value is, mio. DKK	619
Using a WACC at 20%, the value is, mio. DKK	387
Difference, mio. DKK	232 !!!! This is a huge span only caused by 5 points in WACC.

You can now understand why even the top professionals can disagree on price and why all valuations shall be considered an ESTIMATE.
You can also understand why it is so important to understand how these valuations models work and why no automatic online valuation can be serious.

Scenario valuation

One thing I always do is to calculate a sensitivity analysis. In my reports I show this span and in that way the person or company who is my customer understands, that there is a risk on WACC by its uncertainty.

Example: If I conclude that the WACC shall be 20%, I also calculate the value at WACC levels 15% and 25%. Please notice, that this is done by many valuation companies. The task is to find the center WACC value

Investors benefit from WACC

Invest in stage "high" and sell after the company moves to stage "medium-high". This can be done fast if the project is on track. The profit would be from 387 mio. DKK to 619 mio. DKK which is 60% profit.This example is simple but cutting it all down - this is how it works.

Conclusion:

Discounted cash flow can be used for all types of valuations inclusive of Start-ups. It is the primary model, but be careful. Use the WACC RISK MATRIX in DCF.

Contact me if You need a business valuation or have questions. My email address is:

morten@nordicvaluation.dk

Article written by Morten Ramsgaard Lilly Christensen at www.nordicvaluation.dk and www.nordicvaluation.com