

The Key Steps in creating your DCF Model



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- ❖ Building a DCF model can seem daunting if you have never done it before, so allow me to walk you through the key steps...

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- ❖ Revenue Forecasts
 - ❖ The first step is to forecast your revenues which you can do either using the growth rate approach or using the bottom up approach using business drivers
 - ❖ If you are very clever you can use Regression analysis
 - ❖ I recommend you stay away from the Top Down approach, discussed in the previous lecture.

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- ❖ Expenses

- ❖ If you are working with a management team you can ask for them to submit budgets
- ❖ If you are modelling externally then you need to rely on the level of expenses from previous years and extrapolate these based on the level of growth in revenues and assume no change in margins

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- ❖ These two items should enable you to complete your basic Income Statement
- ❖ We now need to turn our attention to the Balance Sheet

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- ❖ Tangible Assets and Working Capital Changes
 - ❖ Tangible Assets will be subject to depreciation and will increase as a result of capital expenditure
 - ❖ This will lead to changes in working capital between Balance Sheet dates
 - ❖ These can be recorded and calculated in a separate schedule if you wish and brought back into the Balance Sheet

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- ❖ Each Capital Asset will need a schedule recording
 - ❖ Opening Balance
 - ❖ Capex
 - ❖ Depreciation
 - ❖ Asset Sales
 - ❖ Closing Balance

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- ❖ Working Capital includes
 - ❖ Accounts Receivable
 - ❖ Accounts Payable
 - ❖ Inventory
- ❖ These need to be calculated and adjusted and their impact on cash recorded
- ❖ Working Capital is a critical function of cash flow and this needs to be fairly represented in the growth of the business

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- ❖ Capital Structure
 - ❖ Now we are interested in the financing of the business
 - ❖ Debt maturity and other non equity instruments need to be taken into account
 - ❖ These normally have their own schedules and in VC and PE models can be complex

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- ❖ Remember in a DCF we are calculating Enterprise Value with Unlevered Cash Flow
- ❖ The current net debt is deducted from the EV to arrive at the Equity Value
- ❖ To this end we are not concerned about changes in the capital structure
- ❖ The starting assumption is no change, other than for known debt service and maturity

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- ❖ Discount Rate
 - ❖ You will need to calculate your Discount Rate based on the Weighted Average Cost of Capital of the Business
 - ❖ You will need to derive the Equity Discount rate from the Capital Asset Pricing Model
 - ❖ Then take a weighted average of the cost of debt and cost of equity

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- ❖ In the Capital Asset Pricing Model the three variables are
 - ❖ Risk Free Rate
 - ❖ Equity Risk Premium
 - ❖ Beta - company specific risk
- ❖ These need careful consideration as even small changes can have a significant impact on your valuation outcome

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- ❖ Terminal Value
 - ❖ As this can comprise a significant proportion of the valuation (as we have already seen) this requires careful calculation
 - ❖ The two approaches are the Perpetual Growth Model or the Transaction Multiple approach
 - ❖ You can model “High” and “Low” assumptions to provide a valuation range

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- ❖ Cash Flow Timing
 - ❖ This is not always annual and the model may begin in the middle of the year
 - ❖ You can overcome this by using the XNPV and XIRR functions in Excel which allow you to precisely specify the time periods and let Excel do the hard work on the discount calculation

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- ❖ Enterprise Value
 - ❖ When you have discounted the cash flows back to the present and added the terminal value you are left with the Enterprise Value - which does not take account of capital structure and allows direct comparison with other companies
 - ❖ Most M&A deals focus on Enterprise Value

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- ❖ Equity Value
 - ❖ If you want to calculate the Equity Value you need to adjust the NPV of the Unlevered Cash Flow for cash and cash equivalents, debt and minority interests
 - ❖ This is a more common approach for Stock Market investors

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