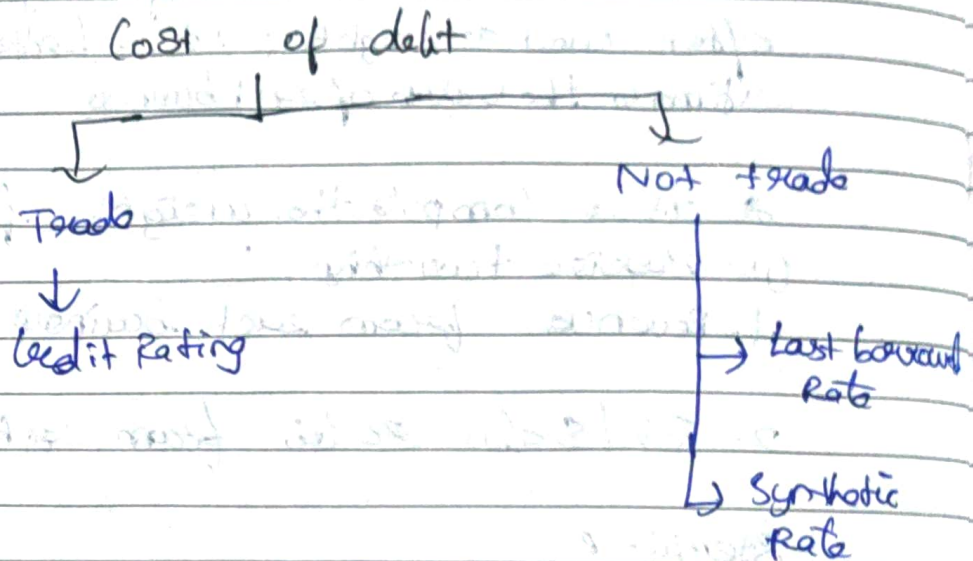


## 3rd week Assignment

LAKSHMI

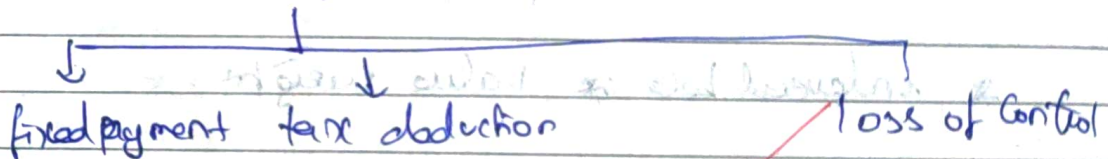
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### 1) Cost of debt



General Rule

Cost of debt



Step 1:-

Determine the bond rating:-

Obtain the company's bond rating from agencies like S&P.

Step 2:-

Find the yield to Maturity (YTM):-

Look up the yield to Maturity with the same rating and Maturity.

Step 3:-

Adjust for tax benefits:-

Since interest expenses are tax deductible adjust the yield to maturity downward by the tax rate.

Step 4:-

Consider default risk:-

If the company has a higher default risk, add default premium to the YTM.

Step 5:-

Calculate the cost of debt:-

The cost of debt is adjusted YTM from Adjust for tax benefits, plus the default premium from Consider default risk.

Example:-

\* Bond Rating: BBB

\* Yield to Maturity for BBB bonds with 10-year Maturity.

\* Tax rate: 30%.

\* Adjusted Yield to Maturity:  $4.5\% \times (1 - 0.30)$   
 $= 3.15\%$

\* default premium: 0.50%.

\* Cost of debt:  $3.15\% + 0.50\% = 3.65\%$



Formula:

Cost of debt = (Yield to Maturity  $\times$  (1 - Tax Rate)) + Default Premium.

pre tax cost of debt = (Risk free rate + Default Spread)  $\times$  (1 - Tax Rate).

Estimating:

\* Interest Coverage Ratio = EBIT / Interest Expenses

\* Rating based on ratio like for a company give ABB

\* Default Spread based on rating for making pre-tax cost.

\* pre-tax cost of debt = Risk free rate + Default Spread  $\times$  (1 - t)

\* After tax cost of debt = pre-tax cost of debt  $\times$  (1 - tax)