3rd week Assignment

1) Cost of debt

- Cost of debt
  - Trade
    - Credit Rating
  - Not trade
    - Last borrowed Rate
    - Synthetic Rate

General Rule
Cost of Debt

- fixed payment
- tax deduction
- loss of Control

Step1:-

Determine the bond rating :-

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

Step2:-

Find the yield to Maturity (YTM):-

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

Step3:-

Adjust for tax benefit:-

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

Step4:-

~~Conde~~ Consider default risk:-

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

Step5:-

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 $= 3.15\% + 0.5\% = 3.65\%$.

Formula:-

Cost of debt = (yield to Maturity x (1-tax Rate) + Default premium.

pre-tax ~~cost of~~ cost of debt = (Risk free Rate + Default (~~credit~~ spread) x (1-Tax Rate).

Estimating:-

* Interest Coverage Ratio = EBIT / Interest Expenses

* Rating based on ratio like for a company give AAA

* Default spread based on rating for making pre tax cost.

* pre-tax cost of debt = Risk free Rate + default spread + (1-t)

* After ~~cost~~ tax cost of debt = pre tax cost of debt (1-tax)