TOPIC

DIRECT AND INDIRECT QUOTE

$ 1= Rs. 75.00 is a direct quote for an Indian national.

Rs. 1 = $0.0133 is an indirect quote

SOME BASIC EXCHANGE RATE ARITHMETIC

- Cross Rate
- Chain Rule
- Value Date ⇒ Accounting date

DQ → $1 = ₹80 = ₹/$ ⇒

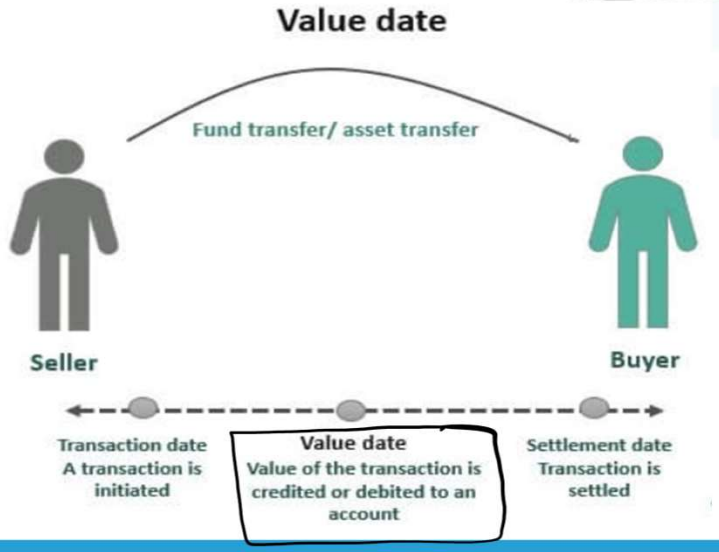
DQ → ¥1 = ₹20 = ₹/¥ ⇒ ¥/₹ = 1/20

$ = ¥ ? ⇒ ¥/$ = ¥/₹ × ₹/$

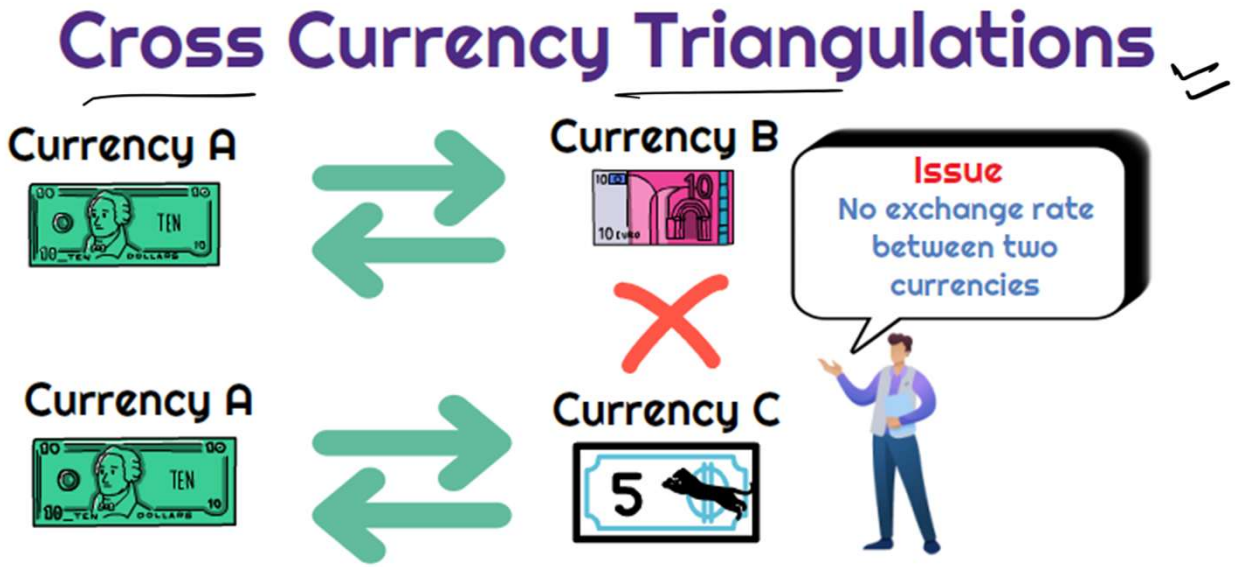
⇒ 1/20 × 80

$ ⇒ ¥4 ⇒ Cross Rate

Chain Rule



TOPIC


Cross Currency Triangulations
Currency A
TEN
Currency B
Issue
No exchange rate between two currencies
Currency A
TEN
Currency C
5

TOPIC

- Cash/ready: It is the rate when an exchange of currencies takes place on the date of the deal.
- TOM: When the exchange of currencies takes place on the next working day,
- SPOT: When the exchange of currencies takes place on the second working day
- Forward rate: If the exchange of currencies takes place after a period of spot date,
- Premium: When a currency is costlier in forward or say, for a future value date,
- Discount: If currency is cheaper in the forward or for a future value date,

TOPIC

FORWARD EXCHANGE RATES

- Forward Points ⇒ $\frac{\text{Spot Rate} \times \text{Int. Rate diff.} \times \text{days}}{100 \times 360}$ ⇒ $\frac{1.50 \times 3 \times 90}{100 \times 360} = 0.01125$
- Arbitrage → Swap Rate

Arbitrage is an operation by which one can make risk free profits by undertaking offsetting transactions.

➢ Calculating Forward Points

Spot exchange rate = 1.5000

Interest rate differential = 3% per annum

USA 15·1· Ind. 12·1·

FP = 0.20
Spot = 10
days = 60
IRD = $\frac{10 \times IRD \times 60}{100 \times 360}$
0.20 = $\frac{10 \times IRD \times 60}{100 \times 360}$
IRD = $\frac{7200}{10 \times 60} = 12·1·$

Forward period = 90 days

No. of days in an year (360 or 365) = 360 days

TOPIC

USA 15+ → 31. India 12+

$$\frac{\text{Spot rate} \times \text{Interest rate differential} \times \text{Foward period}}{100 \times \text{No. of days in the year}}$$

$$\frac{1.500 \times 3 \times 90}{100 \times 360} = 0.01125$$

Imp. Forward differential, is also known as the 'Swap Rate'.

Interest differential from forward points:

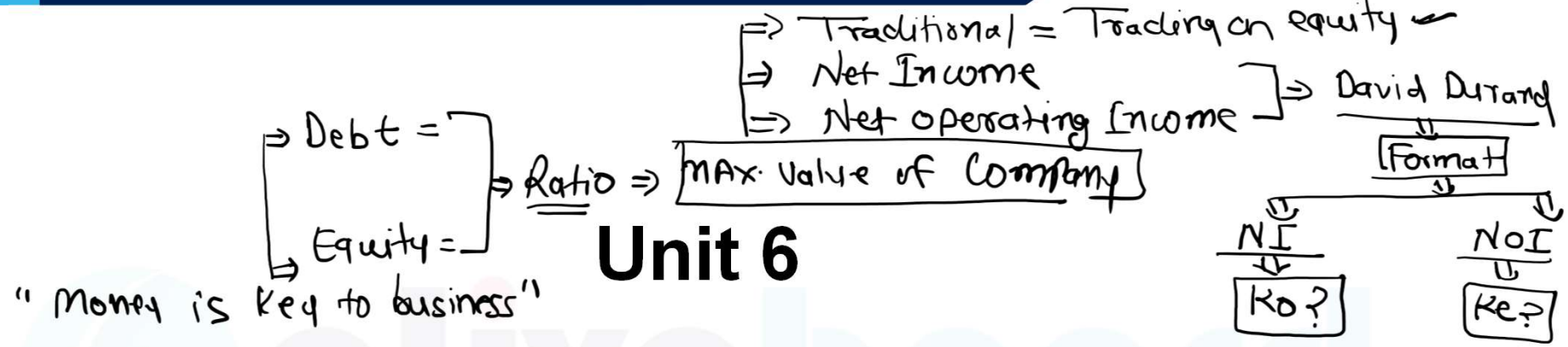
$$\text{Interest rate differential} = \frac{\text{Forward points} \times \text{No. of days in the year x } 100}{\text{Spot rate} \times \text{Forward period}}$$

$$= \frac{0.01125 \times 360 \times 100}{1.50 \times 90} = 3\% \; per \; annum$$

Factors Affecting Forward Point (Swap Rate)

1. Demand-Supply of Currency
2. Market condition
3. Controlled Economy
4. Trade of between Interest Rate in 2 Economy.

TOPIC



Unit 6

Capital Structure and Cost Of Capital

TOPIC

Trading on equity

⇒ Kd < RoI = More loan
⇒ Kd = RoI = may take loan
⇒ Kd > RoI = No loan

"Keep doing business through loan unitll Cost of loan < Return on Investment"

Int 10% < RoI 15% = Loan
15% > 10% = No loan

Assumption of Capital Structure Theories- =

⇒ Net Income
⇒ Net operating Income
⇒ David durand

1. No Tax
2. only debt and equity is source (No PSC)
3. No Repay till winding-up.
4. No change in Co. Risk
5. No change in Co. Condition
6. 100% Dividend declared
7. No issue cost (floatation cost) = ⇒ Commission ⇒ Brokerage ⇒ Processing fee] X
8. All Investor are Rational

TOPIC

Leverage/Gearing:- In the capital structure of a firm, if the ratio of debt capital is very high, it is called Highly Leveraged or highly geared firm. If the ratio of debt capital is low; it is called a Low Leveraged or low geared firm.

D:E

FACTORS INFLUENCING DECISION ON CAPITAL STRUCTURE OF A FIRM

- Norms prevailing in the financial system
- Degree of control ⇒ Share = ⇒ Yes – Equity, ⇒ No – Debt
- Trading on Equity ⇒ Kd < RoI ⇒ Debt
- Cost of Debt = low = Debt
- Size of the firm and its business plans = ⇒ Big = Debt, ⇒ Small = Equity

TOPIC Computation of Value and Cost

Net Income ⇒

EBIT	20,00,000
− Int.	(5,00,000)
PBT (PAT)	15,00,000
÷ Ke	÷ 15·1·
Vo Equity	1,00,00,000
+ Debt	+50,00,000
Vo Firm	1,50,00,000

⇒ Given **NI**
EBIT = 20,00,000
Int. = 5,00,000
Debt = 10% SOL Debt
Ke = 15·1·

⇒ Ask
→ Value of equity = 1Cr
→ Value of firm = 1·5Cr
→ **Ko ?** = $\frac{EBIT}{VoF} \times 100$

$\frac{20,00,000}{1,50,00,00,000} \times 100$

[WACC] **Ko ⇒ 13·33·**

NOI Given ∈ Net operating Income

20,00,000 = EBIT
5,00,000 = Int.
10% SOL Debt = Debt
13·33· = Ko (WACC)

Ask ∈
→ Value of firm = 1·5Cr
→ Value of equity = 1Cr
→ **Ke ?** ⇒ $\frac{EBIT - Int}{Vo\,E} \times 100$

EBIT	20,00,000
÷ Ko	÷ 13·33·
① Vo Firm	1,50,00,000
− Debt	(50,00,000)
② Vo equity	1,00,00,000

$\frac{20L - 5L}{100L} \times 100$ ⇒

Ke = 15·1·
Cost of equity

[WACC] ⇓ Weighted Avg. Cost of Capital / Overall Cost of Capital / Total Cost of Cap / Ko

TOPIC

THEORIES/APPROACHES ON CAPITAL STRUCTURING

- Net Income Approach:- Net Income Approach was put forth by David Durand.
- Net operating income approach (NOI):- Net operating Income approach, developed by David Durand,
- Traditional Position:- When the proportion of debt capital increases in the capital structure of a firm, the cost of debt will start increasing beyond a point.

Assumptions in the Approaches on Capital Structuring

- Debt will not affect the risk perception
- Firms distribute the entire profit to the equity holders.
- Total capital is assumed to be comprising of only debt capital and equity
- There is no income tax

TOPIC

- The business conditions will remain same
- No transaction cost and the frim
- No redeemable sources in the capital composition
- Capital market is perfect and all investors are rational

TOPIC

CONCEPT OF COST OF CAPITAL ⇒ "Source of money for business" = ⇒ Debt = Int. = Kd ⇒ P.S.C. = Div. = Kp ⇒ Equity = Div. = Ke

COST OF DEBT CAPITAL (2)

COST OF PREFERENCE CAPITAL (2)

COST OF EQUITY CAPITAL (4)

(1) Capital Asset Pricing Modelling (CAPM) approach ⇒ $RF + (Rm - RF)\beta$

⇒ Risk free Return = 8%

⇒ Market Return = 20%

⇒ Risk index (Syst. Risk)

⇒ β > 1 = more Risk 1.5

⇒ β = 1 = equal Risk 1

⇒ β < 1 = Low Risk 0.5

"more Risk – More Return"

i) 8 + (20 − 8) 1.5 = 26%

ii) 8 + (20 − 8) 1 = 20%

iii) 8 + (20 − 8) 0.5 = 14%

⇐ Ke

(2) Dividend Growth Model approach ⇒ Gordon's formula ⇒ $\frac{D_1}{P_0} + g$

D_1 → upcoming div.; P_0 → CLY MP; g → growth Rate

PLY DIV. = D_0

⇒ $D_1 = D_0 + g\%$

eg:- To be Paid div. ₹20 CMP ₹400 g = 8%

$Ke \Rightarrow \left[\frac{20}{400} + 0.08\right] \times 100 = 13\%$

eg:- PLY DIV. ₹15 CMP 400, g = 8%

$\Rightarrow D_1 = 15 + 8\% \; (D_0) = \left[\frac{16.20}{400} + 0.08\right] \times 100 = 12.05\%$ (Ke)

Ke

Earning Yield Method

$\frac{EPS}{MPS} \times 100$

eg:- MPS = 200
EPS = 40

$Ke = \frac{40}{200} \times 100 = 20\%$

$Ke = \frac{1}{PIE}$ ⇒ Price earning Ratio

eg:- If PIE Ratio is 5 times find Ke

$Ke \Rightarrow \frac{1}{5} \times 100 = 20\%$

Dividend Yield

$\frac{DPS}{MPS}$

EPS ₹ 40 and 50% is Payout

eg:- MPS ₹ 200 find Ke

⇒ DPS = EPS x Payout
= 40 x 50% = 20

$\frac{20}{200} \times 100 = 10\%$ Ke

TOPIC: Cost of Debt (Kd)

* NP = Issue − Floatation Cost (Issue Cost)

I = Interest Amount, t = tax Rate

NP = Net Proceed = "Actual money Rec. by Co. through debt."

RV = Redemption Value → Repay Value

n = No. of Year

IRREDEEMABLE

(To be Paid at winding up)

* Not Allowed In India

$$\frac{I(1-t)}{NP} \times 100$$

eg:-1 ⇒ $\frac{5L(1-0.30)}{50L} \times 100$

Kd = 7%

eg:-2 = $\frac{5L(1-0.30)}{49L} \times 100$

Kd = 7.14%

eg:-2 What if in eg:1 issue cost @2%. [Floatation Cost]

↳ NP = 50L − 2% = 49L

* "Fc/Ic increases the cost of Capital"

eg:-3. What if in eg:2 Red. Value is 60L and tenure of loan is 5 years, Kd?

Int. = 50L × 10% = 5,00,000

REEDEMABLE

"To be Repaid after fix time"

$$\frac{I(1-t) + \frac{RV - NP}{n}}{\frac{RV + NP}{2}} \times 100$$

eg:-3 ⇒ $\frac{5L(1-0.30) + \frac{60L - 49L}{5}}{\frac{60L + 49L}{2}} \times 100$

Kd = 10.46%