→ Company may distribute the divident, when they make profit.

Divident Decision.

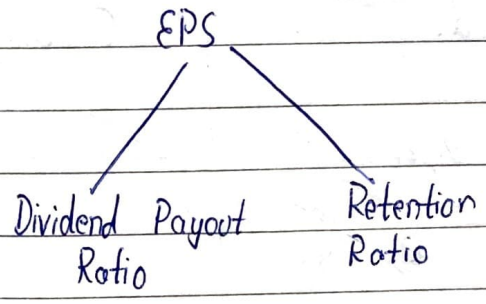
Main Obj. -

→ Increase the wealth of shareholders.

→ To find out if the company pays divident what will be impact on share price.

⇒ Dividend Models

$$EPS = \frac{PAT}{\text{No. of shares}}$$



i) Walter's Model

→ Acc. to Walter's Model, dividend is a relevant & active variable that affects price of the company's shares & value of firm.

→ The optimum dividend decision is taken based on the relationship b/w Rate of Investment (r) & cost of

Equity (IPR) ⟶ K_e

i) Growth Firms ($r > K_e$) (Opportunities of ~~Retai~~ Earnings higher than cost)

ii) Declining Firms ($r < K_e$) (No such Opportunities in near future of Earnings higher than cost.

iii) Normal firms ($r = K_e$) (Indifferent)

→ In case of growth firms we should ~~invest~~ retain & invest

→ In case of declining firms " " distribute the dividents

i) Growth firms ⟶ Retain 100%, Dividend 0%
ii) Declining firms ⟶ Distribute 100%, Retain 0%

Walter's Model $P = \dfrac{Div + \frac{r}{K_e}(EPS - Div)}{K_e}$

Q 1

A ltd.	B ltd.	C ltd.
$r = 15\%$, $K_e = 10\%$, EPS = 8	$r = 10\%$, $K_e = 15\%$, EPS = 8	$r = 15\%$, $K_e = 15$
i) D/P Ratio = 25% (Divident Payout ratio)	D/P Ratio = 50%	D/P Ratio
Div = 8 × 25% = 2	Div = 8 × 50% = 4	
$P = \dfrac{2 + \frac{0.15}{0.1}(8-2)}{0.1}$	$P = \dfrac{4 + \frac{0.15}{0.1}(8-4)}{0.10}$	
P = Rs 110		

~~i) D/P Ratio~~

Q1

i) A Ltd , $r = 15\%$, $k_e = 10\%$, EPS = 8
ii) B Ltd , $r = 10\%$, $k_e = 15\%$, EPS = 8
iii) C Ltd , $r = 15\%$, $k_e = 15\%$, EPS = 8

i) A Ltd

1.1) D/P Ratio = 25%
~~Div~~ Div = $8 \times 25\% = 2$ (Out of whole profit we give 25%)

$$P = \frac{2 + \frac{0.15}{0.1}(8-2)}{0.1} = \text{Rs } 110$$

1.2) D/P Ratio = 50%
$\therefore$ Div = $8 \times 50\% = 4$

$$\therefore P = \frac{4 + \frac{0.15}{0.1}(8-4)}{0.1} = \text{Rs } 100$$

1.3) D/P ratio = 75%
Div = $8 \times 75\% = 6$

$$P = \frac{6 + \frac{0.15}{0.1}(8-6)}{0.1} = \text{Rs } 90$$

→ Optimum policy for A Ltd (growth firm) is to retain all the profit & should not distribute dividend because if the co-pays more dividend its share price decreases.
→ As D/P ratio increases & P ↓, we should retain.

⟹ Gordon's Model (Same as Walter's Model)

$$P = \frac{EPS(1-b)}{k_e - (b \times r)}$$, b = retention ratio

→ Previous Ques (A Ltd)

$k_e = 12\%$, $r = 15\%$, EPS = 8

Div. Pay Out Ratio = 25%, 50%, 75%

i) $1 - b = 25\%$

$b = 75\%$ ↝ Retention Ratio

$$P = \frac{8(0.25)}{0.12 - (0.75 \times 0.15)} = Rs\ 266.67$$

ii) $1 - b = 50\%$, $b = 50\%$

$$P = \frac{8(0.5)}{0.12 - (0.5 \times 0.15)} = Rs\ 88.89$$

iii) $b = 25\%$, $1 - b = 75\%$

$$P = \frac{8(0.75)}{0.12 - (0.25 \times 0.15)} = Rs\ 72.727$$

→ Here in this model we will say ~~we~~ we will retain the profit & in Wardan we will say we will not distribute the dividents

M T W T F S S

Page No.:

Date:

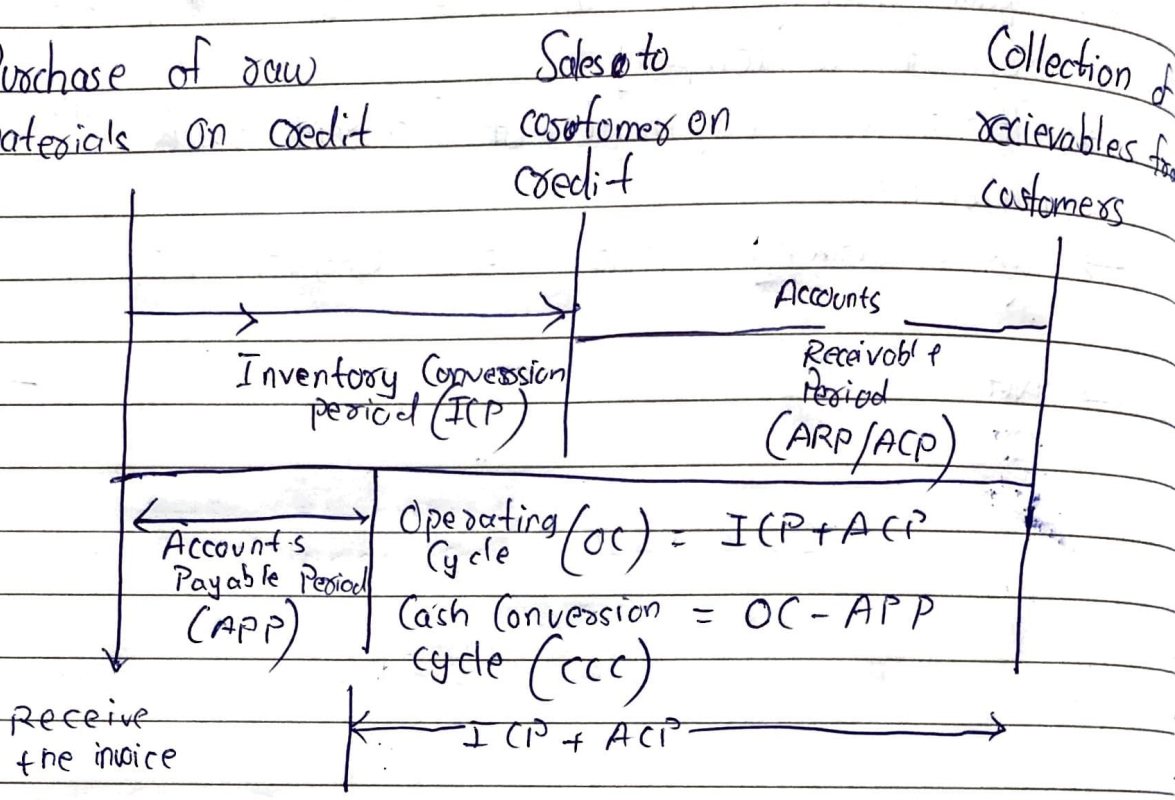
YOUVA

→ Acc. to Gordon's Model, the optimum policy for A Ltd is to retain max. profits, because as the firm's retention ratio (b) decreases, the price also decreases.

⇒ Principals of Working Capital Management.

→ Capital Management in order to fulfill the day to day req. of a company
→ It is a management of current assets & current liabilities
→ Gross Working capital = Current Assets
→ Net " " = " " - Current liabilities

* Operating cycle (OC) & Cash conversion cycle



⟹ Inventory Conversion Period (ICP) = $\frac{\text{Avg Inventory}}{\text{COGS}} \times 360$.

Avg. Inventory = $\frac{\text{OP Inventory} + \text{Closing Inventory}}{2}$

COGS = Cost of Goods Sold.

⟹ Accounts Receivable Period = $\frac{\text{Avg. Debtors (Avg. Receivables)}}{\text{Credit Sales}} \times 100$

Avg. Debtors = $\frac{\text{OP debtors (Opening)} + \text{Cl. debtors (Closing)}}{2}$

Credit Sales = Total Sales - Cash sales.

⇒ Accounts Payable Period = $\frac{\text{Avg Creditors (Avg. Payables)}}{\text{COGS}} \times 360$

Avg. Creditors = $\frac{\text{Op. bal} + \text{Cl. Bal}}{2}$

WCP, Numericals

Q1

1) Avg. Inventory = $\frac{\text{Op. Bal} + \text{Cl. Bal}}{2}$

$= \frac{168000 + 600000}{2} = 3,84,000.$

- Inventory Conversion Period = $\frac{3,84,000}{24,00,000} \times 360 = 57.6$ days

$\approx$ 58 days

~~Approx.~~

2) A/c Receivables period

Avg. Receivables = $\frac{OP + CL}{2} = \frac{600000 + 500000}{2}$

$= 5,50,000$

A/c Rec Period = $\frac{5,50,000}{80,00,000} \times 360$

$= 24.75 \approx 25$ days.

3) A/c Payable Period

Avg. Payables = $\frac{OP + CL}{2} = \frac{4,80,000 + 2,40,000}{2}$

$= 3,60,000$

A/c Payable Period $= \frac{3,60,000}{24,00,000} \times 360 = 54$ days

Operating Cycle = ICP + ARP = 58 + 25 = 83 Days

Cash Conversion cycle = OC - APP
= 83 - 54 = 29 Days

⇒ Estimation of working capital requirement

→ You need to have extra liquidity in your hand.

In particulars we will have 2 categories
1) Current liabilities & 2) Current Assets.

~~Particulars~~

Particulars

A) Current Assets

Raw Materials (Prod. units × R.M./unit × Time)

Work in Progress WIP (Prod. Units × WIP/unit × Time)

Finished Goods (Units × Mfg cost/unit × Time)

Debtors (" × Cash Cost/unit × Time)

Cash Balance

Prepaid Expenses

Outstanding Incomes

⟹ Total current Assets

B) Current liabilities

✓ Wages

✓ Creditors / Suppliers (Units × R.M/unit × Time)

✓ Outstanding expenses (" × Exp/unit × ")

⟹ Total current liabilities

So ((Net Working Capital = (A − B)) + Safety Margin)

This is working capital requirement

Will be given straightaway or calculate as (% of NWC)

⇒ Calculation of Cash Cost

Sales

(−) Gross Profit

Total Mfg Cost

(−) Materials

(−) Wages

Mfg Exps Total

(−) Cash Mfg Expenses

Depreciation

Total Mfg Cost

(−) Dep

Cash Mfg Cost → (Finished Goods)

+ Admin Exps

+ Selling & distribution exps

Total Cash Cost → (Debtors)

WCP - Numericals

Q-2

Calculation of Cash Cost (Working)

Working Note 1

Sales	40,00,000
- G.P. (22% × 40,00,000)	- 8,80,000
→ Mfg Cost	31,20,000
- Materials	- 9,00,000
- Wages	- 5,20,000
→ Mfg Expenses	17,00,000
- Cash Mfg Expenses	- 3,90,000
→ Depreciation	13,10,000

(65000 × 12/2 → year; → given 65k for 2 months)

Calc^{n} of Cash Cost

Mfg Cost	31,20,000	
- Dep	13,10,000	
→ Cash Mfg Cost	18,10,000	(Finished Goods)
+ Admin Expenses	1,60,000	
+ S/D Expenses	2,50,000	
Total Cash Cost (~~Debtors~~)	22,20,000	(Debtors)

Particulars

		Amt
A)	**Assets**	
	Materials $\left(9,00,000 \times \frac{2}{12}\right)$ → For month	1,50,000
	Finished goods $\left(18,10,000 \times \frac{2}{12}\right)$	3,01,667
	Debtors $\left(22,20,000 \times \frac{2}{12}\right)$	3,70,000
	Prepaid S & D exp $\left(2,50,000 \times \frac{3}{12}\right)$	62,500
	Cash Balance	1,20,000
	Total Current Assets	10,04,167
B)	**Liabilities**	
	Creditors $\left(9,00,000 \times \frac{1}{12}\right)$	75,000
	Wages $\left(5,20,000 \times \frac{1}{12}\right)$	43,333
	Outstanding Mfg Exp. (given)	65,000 (Doubt: Why not took month wise amt)
	Total Current Liabilities	1,83,333

$$WC = \underbrace{(A-B)}_{NWC} + \underbrace{\text{Safety Margin (15\%)}}_{\text{Safety}}$$

$$= 8,20,834 + \frac{15}{100} \times 8,20,834 = 9,43,959.1$$

HW
Q3 & 4

Receivables Management

→ Credit Standards (% of Surity that customer will pay how much that amt is)

→ Either V or 1-V will be given in que.

Q1 $\Delta S = 10$ million

$b = 0.08$

$1-V$ (Contribution Margin Ratio) $= 0.15$ $\therefore V = 0.85$

$ACP_n = 60$ days

$k = 15\%$ (Cost of capital)

$$\Delta I = ACP_n \times \frac{\Delta S}{360} \times V$$

$$= 60 \times \frac{10}{360} \times 0.85 = 1.4167$$

$$\Delta RI = \left[(10 \times 0.15) - (10 \times 0.08)\right](1-0.4) - (0.15)(1.4167)$$

$$= 0.207495 \text{ Mn}$$

As ΔRI is +ve, policy is favourable.

2) Credit Period

Q2 See ~~we~~ pdf notes

Here $\Delta RI = 0$. whether you extend your credit period or not

→ It means that your sales will increase ~~or~~ after extending credit period, but your profit will be constant.

3) Cash Discount

→ If credit limit is for eg. 10 days, but if seller tells # customers that if you do payment in 3 days he will give 5% ~~on~~ disc. So early payment will be received & most of the times sales is increased, even after amount received is less comp. to original.

$$\Delta RI = \left[\Delta S\,(1-v) - \Delta DIS\right](1-t) + K\Delta I$$

where ΔDIS (discount) $= P_n\left(S_0 + \Delta S\right)d_n - P_0 S_0 d_0$

$$\Delta I = \frac{S_0}{360} \times \left(ACP_0 - ACP_n\right) - \left(v \times \frac{\Delta S}{360} \times ACP_n\right)$$

P_0 = Proportion of discounted sales before

P_n = % of discounted sales now
d_n = new disc. %
d_0 = old " %

Q3 $\frac{1}{10}$, net 30 meaning Total credit period is 30 days but if you pay within first 10 days you will get 1% disc.

$S_0 = 12\ M$

$ACP_0 = 24$ days , $ACP_n = 16$ days

$V = 0.8$, $1-V = 0.2$

$k = 15\%$

$\Delta S = 1.2\ M$, $P_0 = 0.3$, $P_n = 0.7$

$d_0 = 0.01$, $d_n = 0.02$

$$\Delta DIS = (0.7)(13.2)(0.02) - (0.3)(12)(0.01)$$
$$= 0.1488\ Mn$$

$$\Delta I = \frac{12}{360} \times (24-16) - \left(0.8 \times \frac{1.2}{360} \times 24\right) = 0.284$$

$$\Delta RI = 0.0792\ Mn$$

Q4

4) Collection efforts

Q4 $S_0 = 50\ Mn$

$ACP_0 = 25$ day

$ACP_n = 40$ days

~~$1-V = 0.75$, $V = 0$~~ $V = 0.75$, $1-V = 0.25$

$k = 15\%$

$b_0 = 0.04$, $b_n = 0.06$

$t = 0.3$

$$ARI = -0.28945$$

→ Residual Income

→ As ARI is -ve, company should not relax its collection efforts.