CA IPC & INTER

Financial Management

1 Day Marathon Revision

CA RAHUL GARG

B.COM, FCA, LCS, ACMA, DISA (ICAI), CFA (ICFAI), MBA, ADV. DIP. MGT.

ALL INDIA RANKHOLDER

in CA, CS, CMA (incl. AIR 1)

GOLD MEDALIST

Tribute to my Beloved Elder Brother

SACHIN GARG

(Inspiration for me and all my students)

who left for heavenly abode on 3rd May, 2015

"IF YOU WANT TO BE A LION, YOU MUST TRAIN WITH LIONS."

COST AND WORKS ACCOUNTS EXAM

"No excuses for go-getters"

Monetary hardship, partial vision loss and a parent's illness, could not stand in the way of 23-year-old Rahul's success. Today, Rahul who is also a qualified CA and CS, is in a position to care for his parents and chart out a successful career for himself. He aspires to start his own practice at the age of 35

by Urmila Rao

This Chandigarh boy appeared for the CWA exam in June 2009, and simultaneously wrote the Company Secretary (CS) final exams. "I had cleared the second levels i.e., the Intermediate Levels of both CWA and CS, securing first rank in the former and fourth in CS," says Rahul. "One is eligible to attend both the exams, without the dates overlapping," he adds

CWA course can be completed in three stages; Foundation, Intermediate and Final. Minimum eligibility for the Foundation is Class 12. Graduates are exempted from the Foundation Level

The CWA qualification trains a candidate in areas of accounting, cost and management, audit and tax functions among others, and a CWA professional maintains and scrutinises statutory book of accounts, prepares cash budgets, cash flow statements. Of late, they also provide consultancy services to corporate business houses.

"Enrolment to the Intermediate/Foundation Course is open throughout the year and the exams are conducted in June and December," he shares.

A certified CWA and CS, Rahul is

Rajesh Thakur/Outlook Group

RAHUL GARG
LOCATION: Chandigarh
ROLL NO: 900879
PERCENTAGE: 64.38
YEAR: 2009

also a qualified Chartered Accountant, currently working as senior In-charge, Accountant and Assurance at global firm Grant Thornton

After completing Class 12 at the Government Model School in 2004 and topping with 90.20 percent marks, Rahul enrolled in the CA course simultaneously with BCom, graduated in 2006 and obtained CA qualification in 2008.

But the journey to the top was not easy. Rahul, the third and youngest child in the family, was no stranger to financial hardships. His father is a driver by profession and his mother, a homemaker. And by sheer bad luck, Rahul lost partial vision during a game of bow and arrows.

But despite tough times during

childhood, Rahul's confidence reigns supreme. "For go-getters, there are no excuses," says Rahul. Inspired by his neighbours whose economic situation improved immensely after a family member became a Chartered Accountant after completing the CA programme successfully, Rahul decided to follow suit. "The fact that a CA has the authority to authenticate a company's balance sheet, also fascinated me," says Rahul.

Currently pursuing Chartered Financial Analyst (CFA) Programme and an MBA (Finance) from ICFAI, the ambitious young man aims to complete both courses in a span of two years and get a dual degree. Next in the line are, an I.S.A (Information Systems Audit) from Institute of Chartered Accountants of India, followed by certificates from CIMA (Chartered Institutes of Management Accountants, UK) and IMA (Institute of Management Accountants, USA).

"I want to study and be recognised in my area of work," he says about his acquisitions. Though the CWA qualification is perceived as being a notch below CA with a 40-45 percent of average salary difference, it's the diverse knowledge and increased perspective that is fascinating. "A wider knowledge base will enable me to hold a top corporate position at an early age," he says.

Despite his doctor's advice not to strain his eyes, Rahul remains academically active. Post work, he coaches CA and CWA aspirants. He has also authored four books for commerce graduates. "I have presented the content in a simple, systematic, interesting format," says Rahul, who wants to start his own practice by the time he turns 35.

RAHUL'S STUDY STRATEGIES

- Allotted five hours a day for two months to his toughest subjects - Management Accounting & Financial Analysis and Direct Taxes. Coaching in these areas also helped

- Referred to books by Munish Bhandari for Law, V K Aggarwal for Auditing, and Bangar for Indirect Taxes. His favourites are Tulsian and G Sekar

- Coaching classes helped but it was his self-study which helped him ace professional exams such as CA, CS and CWA

- A positive attitude was a must, and he put in "200 percent" in attempt 1, as failure and reappearing for an exam was not an option

Chandigarh Toppers of Cost FM (May 2016)
1. Shreshtha (on Left) – 91 Marks

2. Iram (on Right) – 73 Marks

**With ICAI(Cost) President Sh. Kunal Banerjee** (for getting All India Rank 1)

Awarded by **Chief Justice Sh. P.N.Bhagwati** in presence of Sh. Atal Bihari Vajpayee

Being Awarded with **CA Degree by ICAI President Sh. Amarjit Chopra**

"Economic & Labour Laws" book being released by Education Minister of UT Sh. VK Singh (IAS) in presence of then Chairman of Chandigarh chapter of ICAI, ICSI, ICAI (Cost)
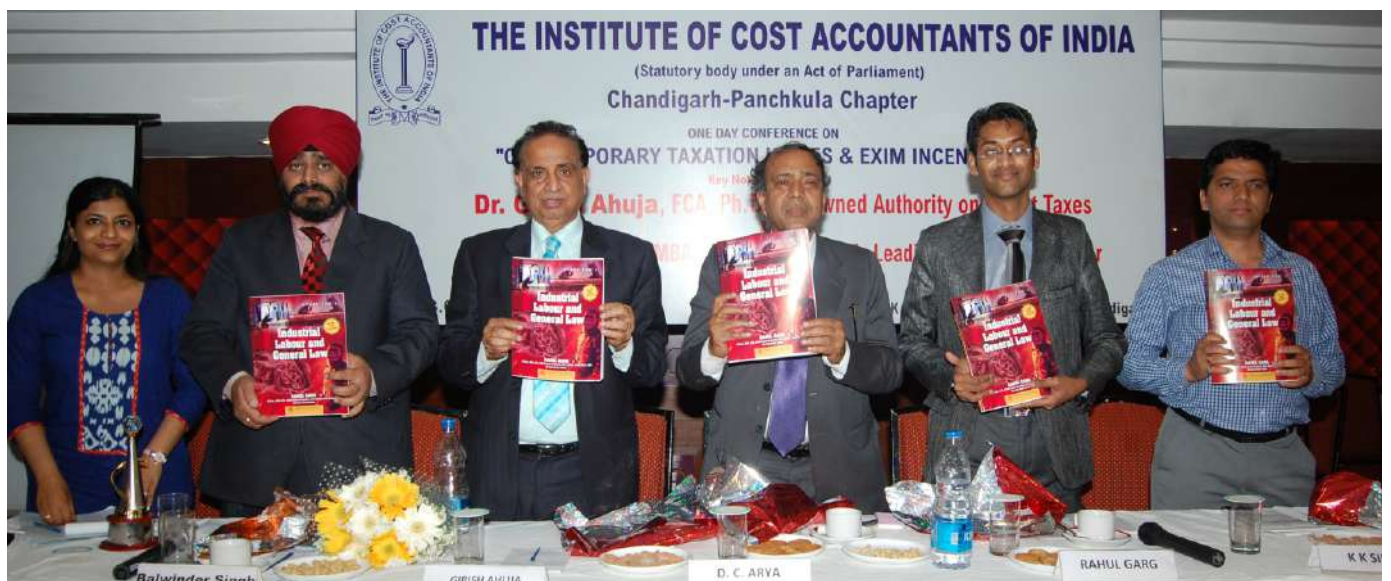
"Industrial, Labour & General Laws" book being released by Dr. Girish Ahuja (A Renowned Personality in Direct Taxes) and Dr. D.C. Arya (Director Finance of Indian Railway)

A brief about Rahul Garg

1. Broke **LIMCA BOOK OF RECORDS** by being youngest in India to clear all the 3 professional courses CA, CS, CMA at the age of 22 years 7 months with Ranks **(A Record).**

2. **5 times All India Rankholder in Professional Exams (A Record).**

3. Scored SINGLE DIGIT RANK 3 times (including **All India Rank 1).**

4. Undisputed achiever of all 3 professional exams with **ALL INDIA RANK in ALL.**

5. Achieved **exemption in 40+ papers** out of total 50 papers held by CA, CS, CMA institutes in his academic career.

6. Awarded by **Mr. Atal Bihari Vajpayee** in 2010 for exceptional performance in Academics.

7. One of the **best motivator** in India.

8. Covered by the National Magazine 'Career 360' amongst **12 National Toppers** in 2010.

9. Specialist in **Time management** and **Stress management skills**.

Love for the subject COST ACCOUNTING & FM

1. First in India to provide **Multi Colour Theory** notes in Cost FM.

2. **Tabular** and **Diagrammatic presentation** of Theory to create interest.

3. Important points of theory Specially marked for **last minute revision**.

4. **Simple and lucid language** in theory for easy understanding.

5. Only one in India to cover more than **2000 Practical Questions** in Cost FM.

6. More than **90% coverage of Practical Questions in CA IPCC** Exams since May 2014 from Rahul sir's notes.

7. His student Shareshtha Kadian scored **91 Marks in Cost FM in May 2016.**

8. Focus on **100% conceptual clarity** and maximum practice of questions.

9. **Special focus on Presentation** and "How to Attempt" to score more than average marks.

RANK Certificate for **All India Rank 41** (May 06) in CA PE II Exam (now CA Inter)

Roll No. 07389

The Institute of Chartered Accountants of India

Rank Certificate

This is to certify that

RAHUL GARG

has passed the

Professional Education Examination - II

held by

The Institute of Chartered Accountants of India

in the month of MAY, 2006

and that he/she obtained FORTYFIRST rank

in that Examination.

Joint Secretary
(Examinations)

Date 29TH JULY, 2006

CA Rahul Garg   Gold Medalist   All India Rankholder in CA, CS, CMA (incl Rank 1)
Best Lectures Regular as well as Fast Track, available at www.carahulgarg.com, (R.S.A.)

RANK Certificate for **All India Rank 4** (June 08) in CS Inter Exam

The Institute of
Company Secretaries of India
IN PURSUIT OF PROFESSIONAL EXCELLENCE
Statutory body under an Act of Parliament

Certificate of Merit

This is to certify that

RAHUL GARG

has passed all the papers of the

INTERMEDIATE EXAMINATION

of Company Secretaryship held in the month of

JUNE, 2008

and has secured

FOURTH RANK

in the order of merit in the said examination.

Date of Issue : 1st December, 2008

Roll Number : 12715

MC Number : 473

Authorised Signatory

Secretary & CEO

CA Rahul Garg   Gold Medalist   All India Rankholder in CA, CS, CMA (incl Rank 1)
Best Lectures Regular as well as Fast Track, available at www.carahulgarg.com, (R.S.A.)

RANK Certificate for **All India Rank 13** (June 09) in CS Professional (Final) Exam

ICSI THE INSTITUTE OF Company Secretaries of India
IN PURSUIT OF PROFESSIONAL EXCELLENCE
Statutory body under an Act of Parliament

Certificate of Merit

This is to certify that

RAHUL GARG

has passed all the papers of the

PROFESSIONAL PROGRAMME EXAMINATION

of Company Secretaryship held in the month of

JUNE, 2009
and has secured

THIRTEENTH RANK

in the order of merit in the said examination.

Date of Issue : 11 January, 2010

Roll Number : 57870

MC Number : 1,053

Authorised Signatory

Secretary & CEO

CA Rahul Garg   Gold Medalist   All India Rankholder in CA, CS, CMA (incl Rank 1)

Best Lectures Regular as well as Fast Track, available at www.carahulgarg.com, (R.S.A.)

RANK Certificate for **All India Rank 1** (June 08) in CMA Inter Exams

Regn. No. NRS/012986

The Institute of Cost and Works Accountants of India

This
Rank Certificate
is awarded to

RAHUL GARG

for his/her having passed in one sitting all the subjects of
the **Intermediate** Examination of The Institute of Cost
and Works Accountants of India held in the month of
June 2008 and for his/her having secured the **First**
Rank.

Given under the Common Seal of The Institute of
Cost and Works Accountants of India, this Twenty fourth
day of August, 2008.

President

CA Rahul Garg   Gold Medalist   All India Rankholder in CA, CS, CMA (incl Rank 1)

Best Lectures Regular as well as Fast Track, available at www.carahulgarg.com, (R.S.A.)

Institute's Gold Medal for **All India Rank 1** (June 08) in CMA Inter Exams

NRS/012986

The Institute of Cost and Works Accountants of India

№. 19

This is to certify that

Rahul Garg

has been awarded the following prizes for his having passed the Intermediate Examination of the Institute of Cost and Works Accountants of India held in June 2008

NAME OF THE PRIZE	PRIZE AWARDED FOR
Institute's First Prize for General Proficiency	Gold Medal for securing the highest total marks without exemption in **Intermediate (Revised) Examination – June 2008**
G. Indira Debi Memorial Gold Medal	For securing the highest total marks without exemption in **Intermediate (Revised) Examination – June 2008**
U.N. Sur Memorial Cash Prize	For securing the highest total marks without exemption in **Intermediate (Revised) Examination – June 2008**
A.K. Biswas Foundation Book Prize	For securing the highest total marks without exemption in **Intermediate (Revised) Examination – June 2008**
Northern Coalfields Limited Merit Award – Book Prize	For securing the highest total marks without exemption in **Intermediate (Revised) Examination – June 2008**
Bikramjit Majumdar Memorial Book Prize	For securing the highest total marks in Stage - I of **Intermediate (Revised) Examination – June 2008**

Given under the Common Seal of the Institute of Cost and Works Accountants of India, this Twenty eighth day of January 2009.

President

RANK Certificate for **All India Rank 3** (June 09) in CMA Final Exams

90167.   Regn. No. NRS/012986

The Institute of Cost and Works Accountants of India

This
Rank Certificate
is awarded to

RAHUL GARG

for his/her having passed in one sitting all the subjects of
the **Final** Examination of The Institute of Cost and
Works Accountants of India held in the month of **June**
2009 and for his/her having secured the **Third** Rank.

Given under the Common Seal of The Institute of
Cost and Works Accountants of India, this Twenty Ninth
day of August, 2009.

President
(G. N. VENKATARAMAN)

RAHUL SHIKHA ACADEMY
RSA
Quest For Excellence

CA Inter

Cost Accounting

Financial Management

Economics

GST

Regular Lectures

Fast Track Lectures
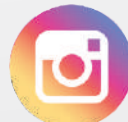
Available In Google Drive

www.carahulgarg.com
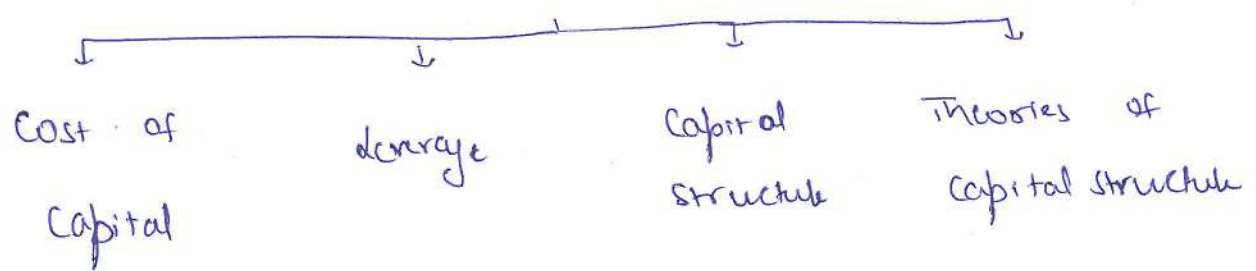
Phone No : Enquiry - 7447383081
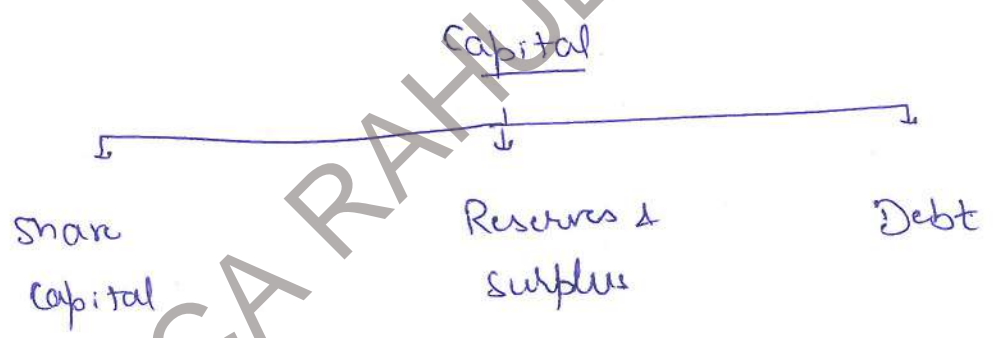
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Follow On

Chapter – 1

Financing Decisions

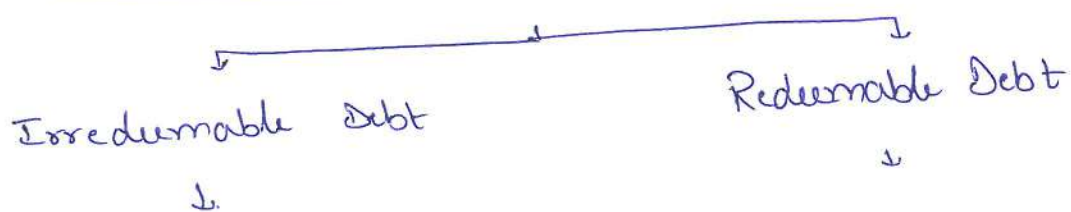- Cost of Capital
- leverage
- Capital Structure
- Theories of Capital Structure

Cost of Capital

- It refers to the payment to be made to various sources of finance.

Capital

- Share Capital
- Reserves & surplus
- Debt

Cost of Capital

Cost of Debt (Kd)

Irredeemable Debt

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

Redeemable Debt

$$\left\{ \frac{I(1-t) + \frac{Rv-NP}{n}}{\frac{Rv+NP}{2}} \right\} \times 100$$
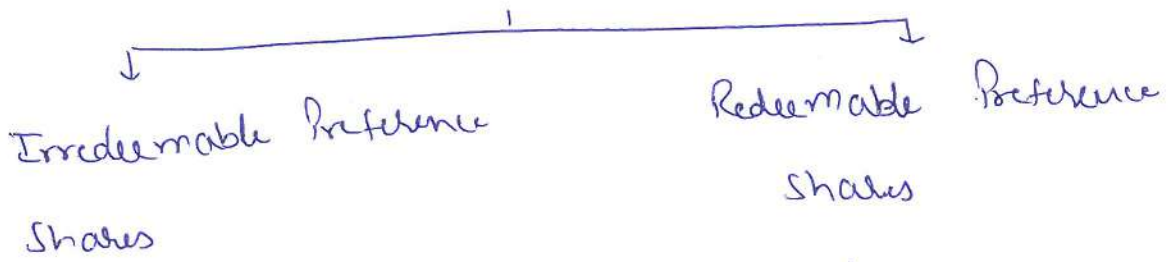
- I = Interest Per Debenture (₹)

- t = Corporate tax rate (%)

- NP = Net Proceeds Per Debenture

- n = Life of debentures

- Rv = Redemption value Per Debenture

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Cost of Preference shares (Kp)

Irredeemable Preference Shares

$$\frac{D}{NP} \times 100$$

Redeemable Preference Shares

$$\left\{ \frac{D + \dfrac{RV - NP}{n}}{\dfrac{RV+NP}{2}} \right\} \times 100$$

D   —   Dividend Per share (₹)

NP   —   Net Proceeds Per share (₹)

n   —   Life of Preference shares

RV   —   Redemption value Per Preference Share

Kp in Presence of CDT

Cost of Equity Share Capital (Ke)

(1) Dividend Yield Model

$$K_e = \frac{DPS}{MPS} \times 100$$

DPS — Dividend Per share (₹)

MPS — Market Price Per share (₹)

(2) Earnings Yield Model

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

EPS — Earnings Per share (₹)

MPS — Market Price Per share (₹)

(3) Dividend Growth Model

$$K_e = \left[\frac{D_1}{P_0} + g \right] \times 100$$

D_1 = Dividend Expected Next Year

D_1 = $D_0 (1+g)$

D_0 = Dividend Declared Previous Year

g = Growth Rate

P_0 = Net Proceeds Per share   Or

Market Price Per share

(4.) Earnings Growth Model

$$K_e = \left[\frac{E_1}{P_0} + g \right] \times 100$$

$$E_1 = EPS \quad \text{Expected at the end}$$

$$= E_0 (1+g)$$

$$E_0 = EPS \quad \text{of previous year}$$

(5.) Realised Yield Approach

$$\text{Growth Rate} = \left(\text{Product of Wealth Ratios} \right)^{\frac{1}{n}} - 1$$

$$n = \text{no. of wealth ratios}$$

$$\text{Wealth Ratio} = \frac{\text{Dividend at the end of year}}{\text{Dividend in the beginning of year}}$$

Example

Current MPS ₹ 125. Data for D/Ds :

Year	D/D (₹)
2011	10.70
2012	11.30
2013	12.50
2014	13.20
2015	14.03

Compute g and K_e.

(6) **Capital Asset Pricing Model (CAPM)**

$$K_e = R_f + \beta (R_m - R_f)$$

R_f — Risk free Rate of Return

     — Govt. Rate

     — Rate of Treasury Bill

     — G-Sec. Rate

β — Beta coefficient of Equity shares

     — Market Sensitivity Index

     — Market Related Risk

R_m — Expected Return of Market

$R_m - R_f$ — Market Risk Premium

Cost of Retained Earnings (Kre)

In absence of Personal Taxes

$$Kre = \frac{D_1}{P_0} + g$$

[Don't deduct floatation cost]

In Presence of Personal Taxes

$$Kre = Ke (1-tp) (1-B)$$

tp = Personal Tax Rate of shareholder

B = Brokerage (%)

Weighted Average Cost Of Capital

Statement showing computation of WACC

S. No.	Source of finance	Amt (₹)	Weight	Cost	Weight x cost
1.	ESC				
2	PSC				
3.	R & S				
4.	Debt				

Book value Vs. Market value Weights

Leverages

(1.) Operating Risk

- It is measured by Dyree of operating Leverage (DOL).

- Higher the DOL, higher is the operating risk.

- Condition to apply DOL is the existence of fixed operating cost.

- If one period data is given

$$\frac{Contribution}{EBIT}$$

- If two period data is given

$$\frac{Percentage\ change\ in\ EBIT}{Percentage\ change\ in\ Sales\ or\ Contribution}$$

- DOL measures the effect of change in Sales on EBIT.

(2.) Financing Risk

· It is measured by Dgree of financial leverage. (DFL)

· Higher the DFL, higher is the financing Risk.

· Condition to apply DFL is the existence of fixed financing cost.

· If one period data is given:

Equity   ✓   ✓

Debt   ✓   ✓

Pref.   ✗   ✓

           ↓   ↓

        $\dfrac{EBIT}{EBT}$ $\dfrac{EBIT}{EBT - \dfrac{P. D/D}{1-t}}$

· If two period data is given :

$$DFL = \dfrac{\text{Percentage change in EPS}}{\text{Percentage change in EBIT}}$$

· So, DFL measures the effect of change in EBIT on EPS.

(3.) Combined Risk

- It takes into account operating as well as financing risk

- It is measured by Degree of combined leverage (DCL).

- $DCL = DOL \times DFL$

- If one period data is given

```
Equity        ✓                    ✓
Debt          ✓                    ✓
Preference    ✗                    ✓
              ↓                    ↓
```

$$\frac{Contribution}{EBIT} \times \frac{EBIT}{EBT}$$

$$= \frac{Contribution}{EBT}$$

$$\frac{Contribution}{EBIT} \times \frac{EBIT}{EBT - \frac{P. D/D}{1-t}}$$

$$= \frac{Contribution}{EBT - \frac{P. D/D}{1-t}}$$

- If two period data is given

$$\frac{Percentage\ change\ in\ EBIT}{Percentage\ change\ in\ Sales} \times \frac{Percentage\ change\ in\ EPS}{Percentage\ change\ in\ EBIT}$$

$$= \frac{Percentage\ change\ in\ EPS}{Percentage\ change\ in\ Sales}$$

- So, DCL measures the effect of change in sales on EPS.

Capital Structure.

- Choosing optimum capital structure

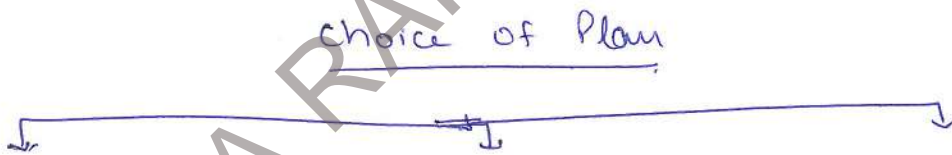|	Option 1	Option 2	Option 3
EBIT			
(-) Interest			
= EBT			
(-) tax			
= EAT			
(-) Pref. D/D			
= Earnings for Equity Shareholders			
÷ no. of Equity shares			
= EPS			
× P/E			
= MPS			

That option shall be chosen; which provides maximum MPS.

Indifference Point

It is that level of EBIT, at which the firm has 2 such financial plans, which result in same level of EPS.

$$\underbrace{\frac{(EBIT - I)(1-t) - Pref.\ D/D}{n}}_{Plan\ 1} = \underbrace{\frac{(EBIT - I)(1-t) - P.D/D}{n}}_{Plan\ 2}$$
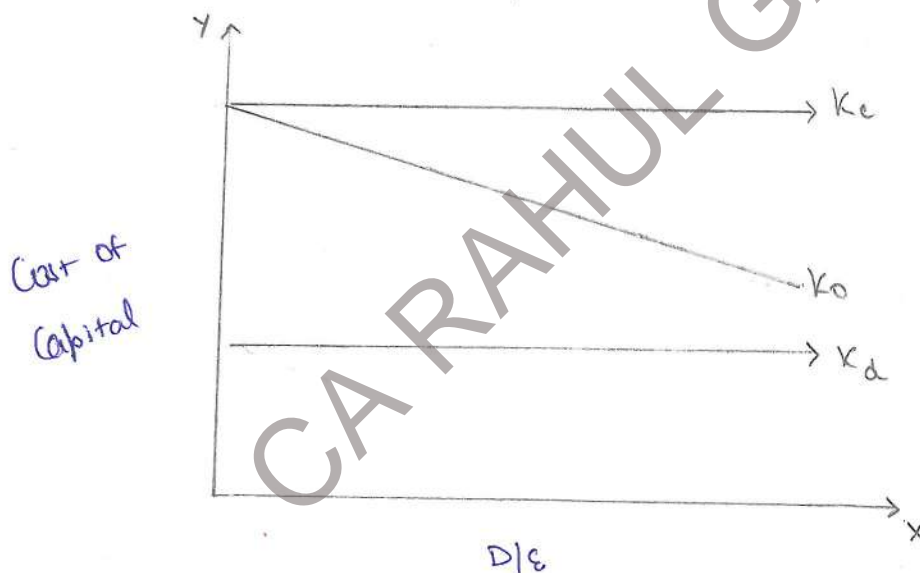
$$\boxed{EBIT = ?}$$

choice of Plan

Theories of Capital Structure

$$V_f = \frac{EBIT}{k_o}$$

$$V_f = V_d + V_e$$
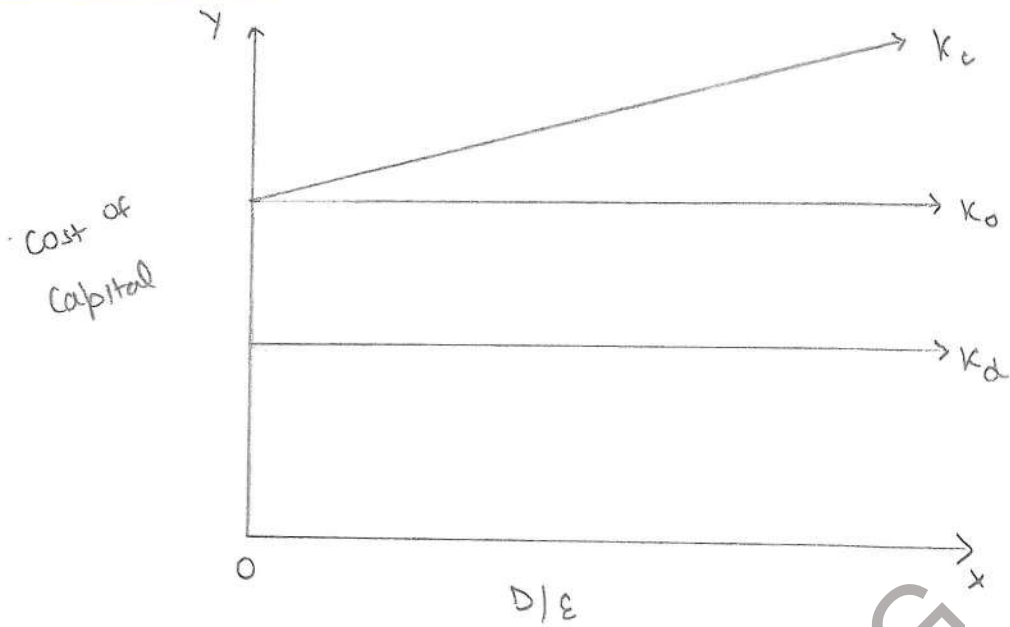
$$= \frac{Interest}{k_d} + \frac{EBIT - Int.}{k_e}$$

Net Income Theory

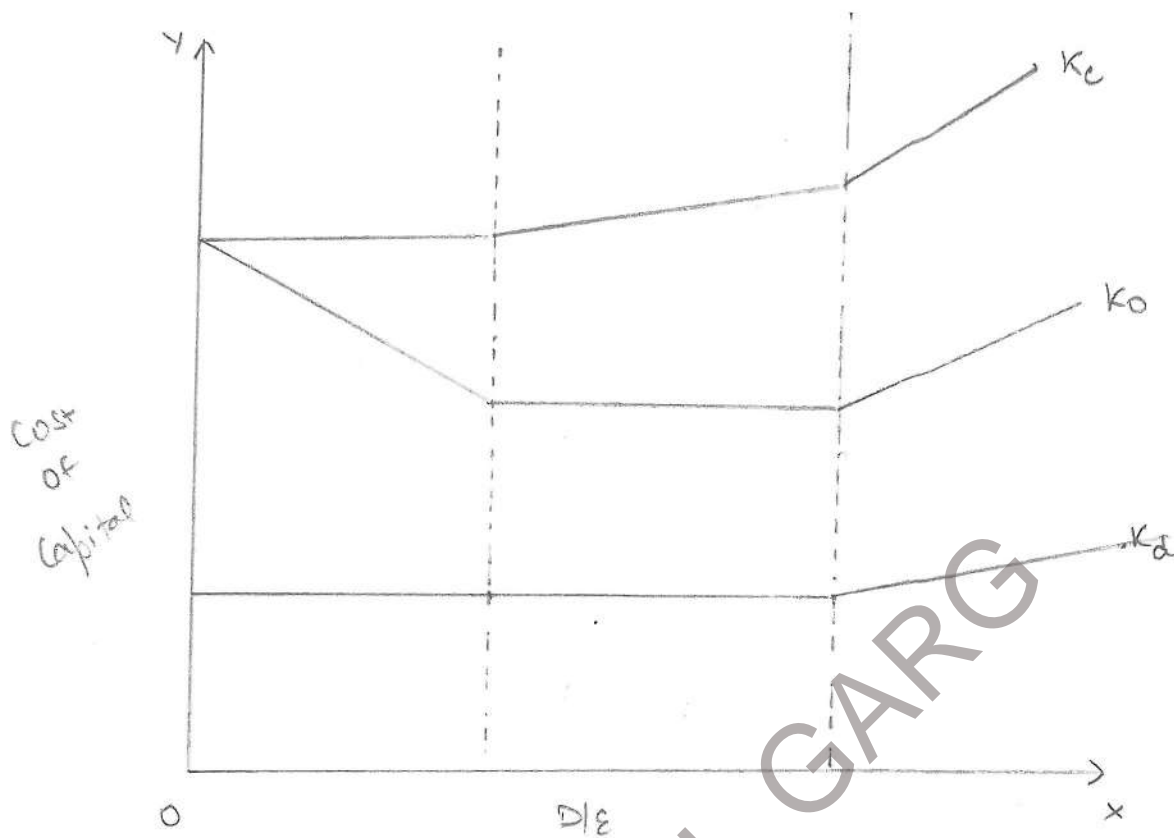Example: Expected EBIT ₹ 2L. It has ₹ 8L in 10% Debt; k_e is 12.5%. Compute V_f & k_0.

Net Operating Income Theory

Y axis: Cost of Capital

X axis: D/E

Lines: K_e, K_o, K_d

Example : EBIT of X Ltd. ₹ 9L. Current Debt ₹ 30L.
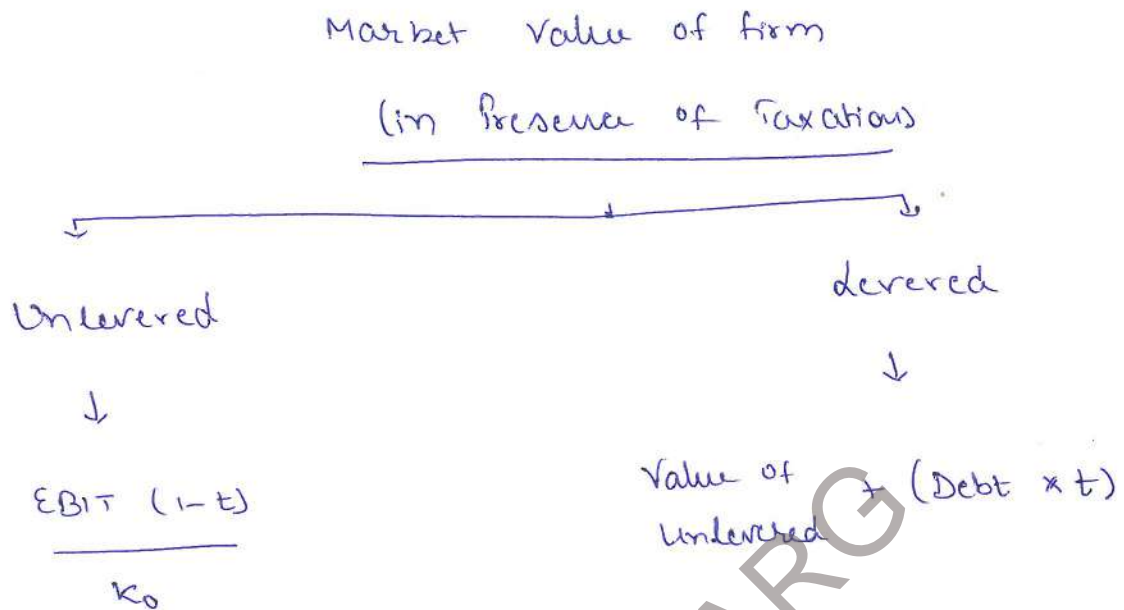
K_d 10% . K_o is 12%. Compute K_e.

Traditional Approach

Example : Determine the optimum capital structure.

Debt as a % of total capital employed	Cost of Debt (%)	Cost of Equity (%)
0	5	12
10	5	12
20	5	12.5
30	5.5	13
40	6	14
50	6.5	16
60	7	20

Modigliani and Miller's Theory

Market value of firm
(in Presence of Taxation)

Unlevered → Levered →

Unlevered:
$$\frac{EBIT(1-t)}{Ko}$$

Levered:
Value of Unlevered + (Debt × t)

Example

A Ltd. & B Ltd. are identical in every respect except 'Capital structure'. A Ltd. doesn't employ debt in its capital structure whereas B Ltd. employs 12% Debentures amounting to ₹ 10 Lakhs. Income Tax Rate is 30%, EBIT is ₹ 2,50,000. Equity Capitalisation Rate of 'A' Ltd is 20%. Find value of both the companies.
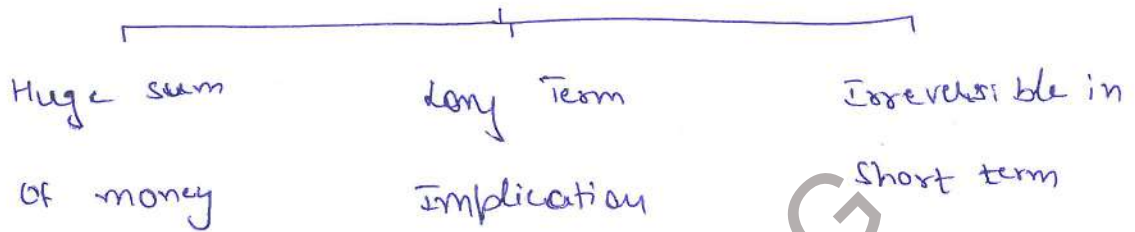
CHAPTER - 2

Investment Decisions

Capital Budgeting Decision is Important

| Huge sum of money | Long Term Implication | Irreversible in Short term |

Techniques

Traditional
↓

- Average Rate of Return
- Pay Back Period & its Variants

Modern
↓

- Discounted Pay back Period
- Net Present Value
- Profitability Index
- Internal Rate of Return.
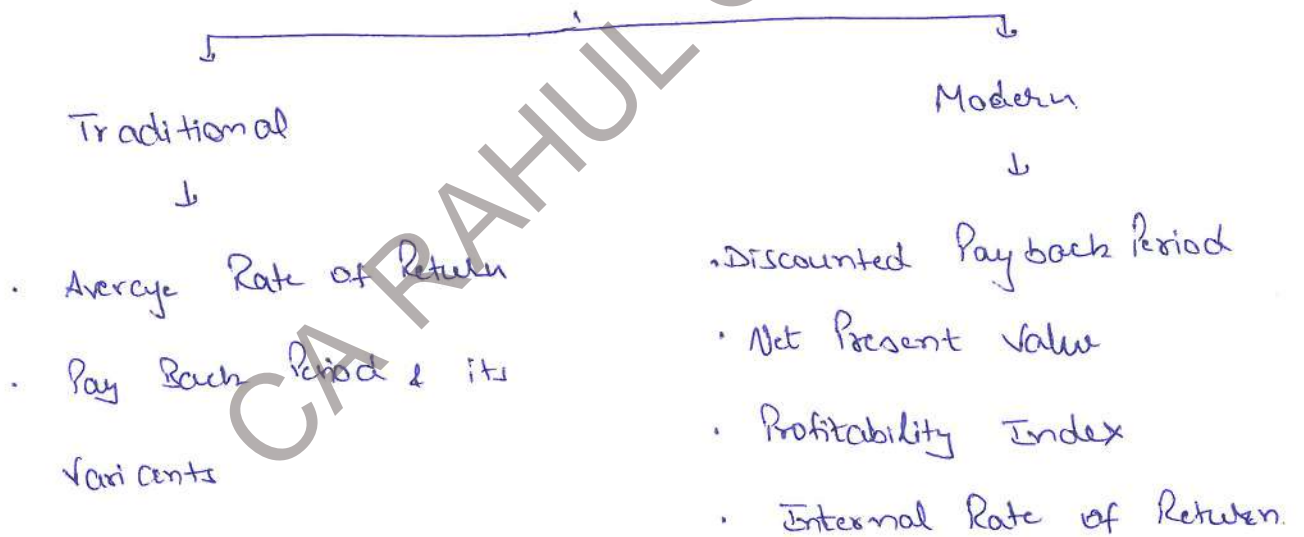
Average Rate of Return

- It is the rate of return generated by the project during its life.

- $$ARR = \frac{\text{Average Profit after Tax}}{\text{Average Investment}} \times 100$$

- $$\text{Average PAT} = \frac{\text{Total PAT of all Years}}{\text{No. of Years}}$$

- $$\text{Average Investment} = \frac{\text{Cost of Project} + \text{Salvage value}}{2}$$

Computation of Cash Flows

Method 1	Method 2
EBDIT	EBDIT
− Dep	− Int
= EBIT	= EBIT
− Int	− tax
= EBT	= EAT
− tax	+ Tax saving due to depreciation
= EAT	
+ Depreciation	
= Cash Inflow	

Pay Back Period

- It is the period within which cost of the project will be recovered

Formula

If cash flows are equal p.a.	If cash flows are not equal p.a.
$$\frac{\text{Cost of Project}}{\text{Annual Cash Inflow}}$$	Detailed schedule shall be prepared wherein all the cash flows will be accumulated to interpolate the pay back Period.

Difference between Traditional & Modern Techniques

Discounted Payback Period

Statement showing Cumulative PVCF

Year end	Cash I/f	PVF @ __ %	Pv CF	Cum. PvCF

Example

Cost of Project ₹ 1,00,000

Annual Cash I/f ₹ 60000, 50000 & 40000

Life 3 Years

Discounting Rate 10%.

Solution

Year end	Cash I/f	PVF @ 10%	PVCF	Cum. PVCF
1	60000	.909	54540	54540
2	50000	.826	41300	95840
3	40000	.751	30040	125880

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Net Present Value

- It denotes the net value of cash flows from the project, either positive or negative.

- $NPV = \Sigma PVCI - \Sigma PVCO$

- Statement showing computation of NPV

Year end	Particulars Cost	Cash Flow	PVF @ _ %	PVCF

Acceptance Criteria

Example

Cost of Project = ₹ 1,00,000 , Life 5 years,

Cash Inflows P.a. = ₹ 50,000, 40,000, 30000, 20000, 10000

Discounting Rate 10%.

Solution

Year end	Particulars	Cash flow (₹)	Pvf @ 10%	PVCF
0	Cost of Project	-100000	1	-100000
1	Annual Cash I/f	50000	0.909	45450
2		40000	0.826	33040
3		30000	0.751	22530
4		20000	0.683	13660
5		10000	0.621	6210
				20890

Example

Cost of Project = ₹ 1,00,000 , Life 6 years

Cash Inflows P.a. = ₹ 25,000.

Discounting Rate 12%.

Solution

Year end	Particulars	Cash Flow (₹)	Pvf or AF @ 10%	PVCF
0	Cost of Project	-100000	1	-100000
1-6	Cash I/f	25000	4.111	102775
				2275

Profitability Index | Desirability Factor

- $PI = \dfrac{\Sigma PVCI}{\Sigma PVCO}$

  Acceptance Criteria.

Net Profitability Index

- $NPI = \dfrac{NPV}{\Sigma PVCO}$

  $= \dfrac{\Sigma PVCI - \Sigma PVCO}{\Sigma PVCO}$

  $= \dfrac{\Sigma PVCI}{\Sigma PVCO} - \dfrac{\Sigma PVCO}{\Sigma PVCO}$
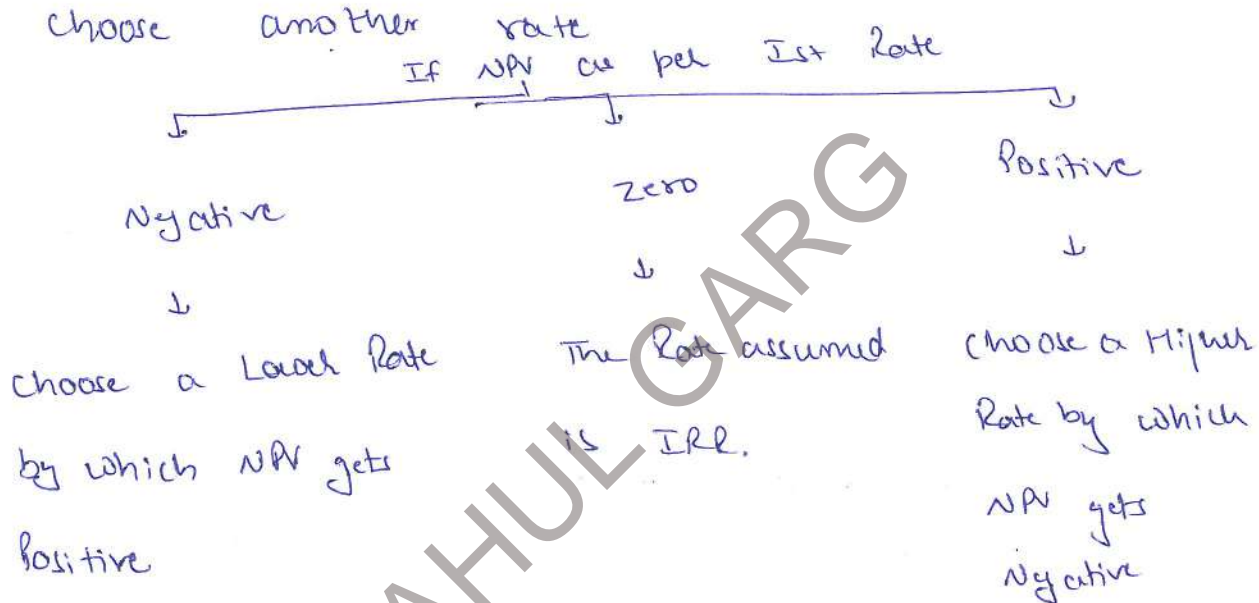
  $= PI - 1$

Internal Rate of Return

- It is the rate at which $\Sigma Pvci = \Sigma Pvco$

  i.e. $NPV = 0$

- steps to find IRR

  - assume any rate and find NPV

  - choose another rate

    If NPV as per Ist Rate

Negative	zero	Positive
↓	↓	↓
choose a Lower Rate by which NPV gets positive	The Rate assumed is IRR.	choose a Higher Rate by which NPV gets Negative

  - Find one Positive & one Negative NPV; at 2 different rates; the gap of which should not exceed 4 - 5%.

  - $$IRR = Lower\ Rate + \frac{Positive\ NPV}{Positive\ NPV - Negative\ NPV} \times Difference\ in\ Rates$$

Projects Having Unequal lives

- Equalised NPV $= \dfrac{NPV}{AF\ (r\%,\ n)}$

- choice of project shall be made on the basis of Equalised NPV.

Working Capital

It represents the amount required to be invested in project in the form of net current assets.

Scrap value

- It represents the amount which can be fetched from the project or the asset, after its life is over

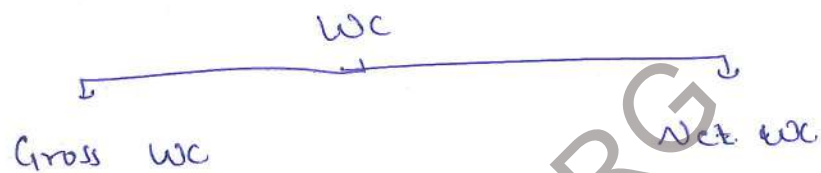|	Case a	Case b	Case c
Book value	500000	50000	50000
Scrap value			
CG/ (CL)			
Tax Impact			
Net Cash I/f			

Formula:

Chapter - 3

Working Capital Management

Working Capital

It refers to the funds required for day to day business operations

Types

WC

Gross WC   Net WC

Estimation of WC

To have the better management of Working Capital, its estimation in advance is essential and important.

Estimation of Current Assets
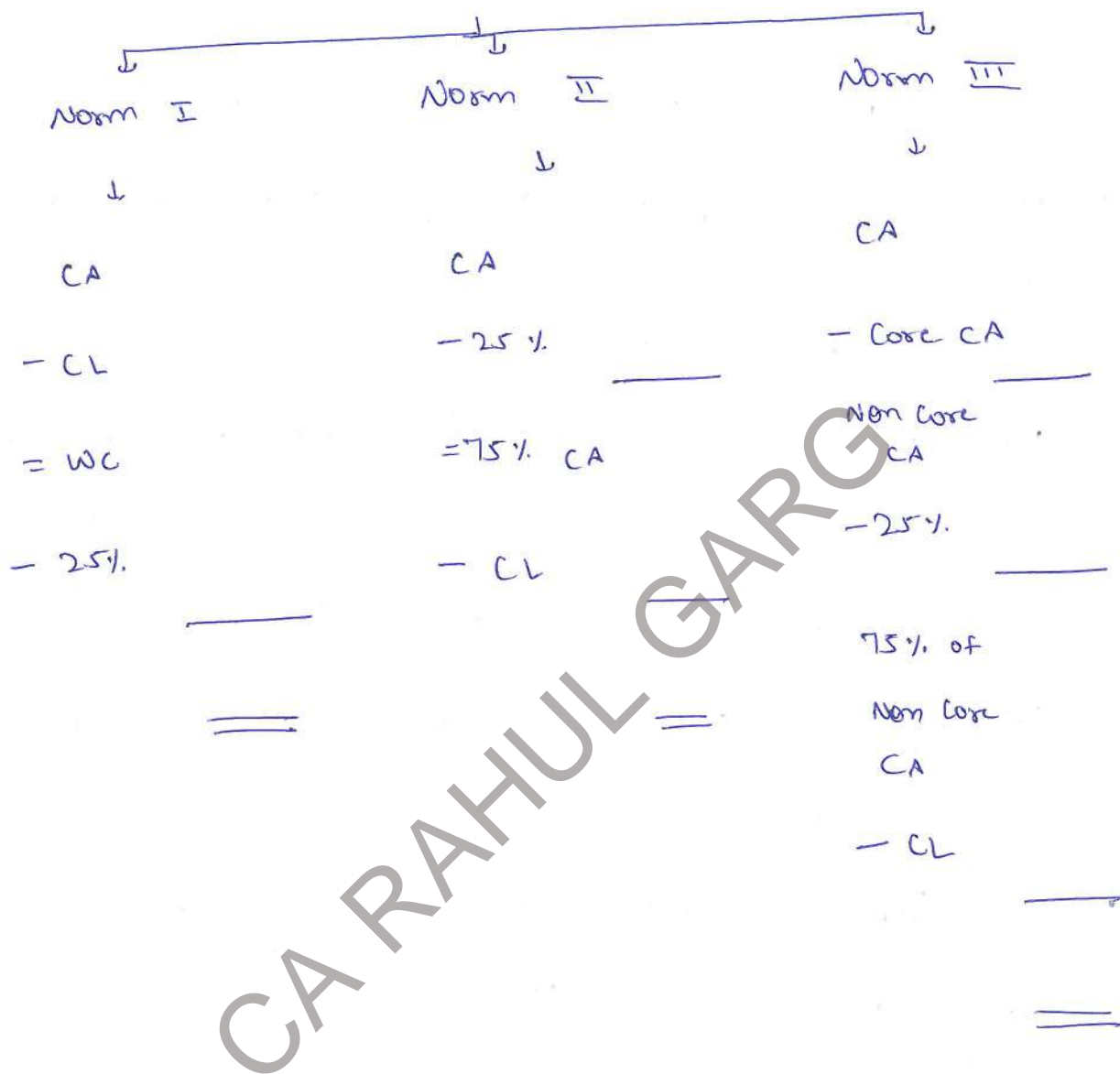
- Estimation of Current Liabilities

= Estimated Working Capital

Statement showing Estimation of Working Capital

S.No.	Particulars	Computation	Amt(₹)
(A)	**Current Assets**		
1.	Raw Material Inventory	Raw Material Consumed $\times \dfrac{\text{Raw Material Holding Period}}{360\,D / 52\,W / 12\,M}$	
2.	WIP Inventory		
a.	Material	Raw Mat. consumed $\times \dfrac{\text{Conversion Period}}{360D / 52W / 12M} \times$ DOC	
b.	Labour	Direct wages $\times \dfrac{\text{Conversion Period}}{360\,D / 52W / 12M} \times$ DOC	
c.	Overheads	Factory O/H $\times \dfrac{\text{Conversion Period}}{360\,D / 52W / 12M} \times$ DOC	
3	Finished Goods Inventory	Cost of Production $\times \dfrac{\text{Stock Holding Period}}{360\,D / 52W / 12M}$	
4.	Debtors	Credit Sales $\times \dfrac{\text{Average Collection Period}}{360\,D / 52W / 12M}$	
5.	Prepaid Expense	Total Exp. for Period $\times \dfrac{\text{Time of Prepayment}}{360\,D / 52W / 12M}$	
6.	Cash		
	Total		
(B)	**Current Liabilities**		
1.	RM Creditors	Credit Purchase $\times \dfrac{\text{Avg. Payment Period}}{360\,D / 52W / 12M}$	
2.	O/S Expenses	Exp for the period $\times \dfrac{\text{Time Lag}}{360\,D / 52W / 12M}$	
	Total		
(C)	Working Capital	(A) − (B)	
(D)	Safety Margin		
(E)	Total Work. Cap	(C) + (D)	

- Raw material consumed means
  opening stock of raw material
  + Purchases of raw material
  — closing stock of raw material

- But while computing creditors also; we take raw mat. consumed because opening stock & closing stock are assumed to be same (as the concern is going on from one to other period)

- If Q is silent, assume DOC for WIP as 100%, 50% & 50% for Material, Lab & O/h.

- Depreciation (if given) is not to be considered for any computation (as it is non cash)

- If Question asks to compute WC on CASH COST BASIS; Profit is not to be taken into account i.e. Dr's are to be computed at cost of credit sales rather than credit sales

Maximum Permissible Bank Finance As Per
Tondon Committee

Norm I	Norm II	Norm III
CA	CA	CA
− CL	− 25%	− Core CA
= WC	= 75% CA	Non Core CA
− 25%	− CL	− 25%
		75% of Non Core CA
		− CL

Effect of Double shift on WC

- Total units to be produced get doubled as there is extra shift working.

- No. of units of WIP don't change at all ie for computation of WIP, same no. of units shall be taken as of single shift working.

- All the variable expenses like Direct Material, wages get also doubled (due to output being doubled) in totality.

- However, the amount of fixed overheads don't change in totality but these become half on per Unit basis. i.e. overall cost on Per Unit basis comes down.

Computation of Operating Cycle

Raw Material Holding Period

+ WIP Conversion Period

+ FG Holding Period

+ Average Collection Period

− Average Payment Period

$$\text{No. of operating cycles in a year} = \frac{360 \text{ Days}}{\text{Operating cycle Period}}$$

$$\text{Amt. of working Capital Required} = \frac{\text{Annual Operating Cost}}{\text{No. of operating cycles}}$$

Debtor's Management

Statement showing Incremental Gain or Loss

Particulars	Current Policy	Option 1	Option 2
• Sales			
• Contribution			
• Incremental Contribution			
• Bad Debts			
• Incremental Bad Debts			
• Admin. Cost			
• Incremental Admin. Cost			
• Collection Exp			
• Incremental Collection Exp			
• Opportunity Cost			
• Incremental Opportunity Cost			
= Net Incremental Gain/ (Loss)			

Opportunity Cost

$$\underbrace{\underbrace{\underbrace{\underbrace{\underbrace{Sales \times \frac{credit}{Sales} \%}_{credit\ sales} \times Cost\ \% }_{Cost\ of\ credit\ sales} \times ACP}_{Cost\ of\ Debtors} \times Return\ \%}_{Opportunity\ Cost\ of\ funds\ blocked\ in\ Dr's}}$$

Impact of Fixed Cost

Computing Return Before Tax

Cash Management

(1) **Optimum Cash Balance**

William J. Baumol Model

$$\sqrt{\frac{2 \times A \times T}{C}}$$

A = Annual Requirement of Cash

T = Transaction Cost

C = Carrying Cost

(2) Average Cash Balance = $\dfrac{\text{Optimum Cash Balance}}{2}$

Cash Budget

S.No	Particulars	1	2	3	4
A.	Opening Balance				
B.	Receipts				
	• Cash Sales				
	• Receipt from Drs				
	• Sale of Asset				
	• Tax Refund				
	Total (B)				
C.	Payments				
	• Cash Purchases				
	• Payment to Cr's				
	• ~~Material~~ Payment for wages				
	• Payment for o/hs				
	• Payment for Tax				
	• Purchase of Asset				
	Total (C)				
D.	Balance				
	− Investment				
	+ Sale of Investment				
	+ Borrowings				
	= Closing Balance				

Chapter - 4

Ratio Analysis

Profitability Ratios

- GP Ratio $= \dfrac{GP}{Net\ Sales} \times 100$

- NP Ratio $= \dfrac{NP}{Net\ Sales} \times 100$

- Return on Investment $= \dfrac{EBIT}{Capital\ Employed} \times 100$

- Return on Equity $= \dfrac{Earnings\ available\ for\ Equityholders}{Equity\ shareholder\ Funds} \times 100$

- Return on Net Worth $= \dfrac{Earnings\ after\ Tax}{Shareholder\ funds} \times 100$

- Return on Total Assets $= \dfrac{Earning\ After\ Tax}{Total\ Assets} \times 100$

Activity Ratios

- Asset Turnover Ratio $= \dfrac{\text{Net Sales}}{\text{Av. Total Assets}}$ [×100]

  ↑
  if Qs says in %.

- Working Capital Turnover Ratio $= \dfrac{\text{Net Sales}}{\text{Average Working Capital}}$

- Debtor Turnover Ratio $= \dfrac{\text{Net Credit Sales}}{\text{Average Receivables}}$

  Dr's Collection Period $= \dfrac{360\ D\ |\ 52\ w\ |\ 12\ M}{\text{Dr's T/o Ratio}}$

- Creditors Turnover Ratio $= \dfrac{\text{Net Credit Purchases}}{\text{Average Payables}}$

  Cr's Payment Period $= \dfrac{360\ D\ |\ 52\ w\ |\ 12\ M}{\text{Cr's T/o Ratio}}$

- Stock Turnover Ratio $= \dfrac{\text{COGS}}{\text{Average Stock}}$

  Stock Holding Period $= \dfrac{360\ D\ |\ 52\ w\ |\ 12\ M}{\text{Stock T/o Ratio}}$

Coverage Ratios

- Interest Coverage Ratio $= \dfrac{EBIT}{Int. \ on \ Debt}$

- Cover for Preference Dividend $= \dfrac{Earnings \ After \ Tax}{Preference \ Dividend}$

- Cover for Equity Dividend $= \dfrac{Earnings \ Available \ for \ Equity \ shareholders}{Equity \ Dividend}$

- Debt service Coverage Ratio

$= \dfrac{Earnings \ Available \ for \ Debt \ Service}{Interest \ On \ Debt + Installment \ of \ loan \ Due \ Within \ 1 \ Year}$

Earnings Available for Debt Service

$= Profit \ After \ Tax + Interest \ on \ loan + Depreciation \ and \ other \ non \ cash \ expenses$

Market Test Ratios

- Earning Per share = $\dfrac{\text{Earnings Available for Equity Holders}}{\text{No. of Equity shares}}$
  (EPS)

- Dividend Per share (DPS) = $\dfrac{\text{Total Dividend for Equity shareholders}}{\text{No. of Equity Shares}}$

- Dividend Payout Ratio = $\dfrac{DPS}{EPS} \times 100$

- Dividend Yield Ratio = $\dfrac{DPS}{MPS} \times 100$

- Earnings Yield Ratio = $\dfrac{EPS}{MPS} \times 100$

- ~~Dividend Yield Rat~~ Price Earning Ratio = $\dfrac{MPS}{EPS}$

Solvency / Financial Ratios

→ **Short Term Solvency Ratios**

- Current Ratio / = $\dfrac{\text{Current Assets}}{\text{Current Liabilities}}$

  Working Capital
  Ratio

- Quick Ratio / = $\dfrac{\text{Liquid Assets}}{\text{Liquid Liabilities}}$

  Liquid Ratio

  Current Assets | Current Liabilities

  − Stock | − Bank O/D

  − P/P Expenses

→ **Long Term Solvency Ratios**

- Debt Equity Ratio = $\dfrac{\text{Debt}}{\text{Equity}}$

  Debt − Long Term Debt

  Equity − Shareholder funds

- Capital Gearing Ratio

$$= \frac{\text{Long Term Funds Bearing Fixed Rate of Return}}{\text{Long Term Funds Bearing Variable Rate of Return}}$$

Debt

+ Preference share
capital

Equity shareholder funds

- Proprietary Ratio $= \dfrac{\text{Shareholder Funds}}{\text{Total Assets}}$

- Fixed Assets Ratio $= \dfrac{\text{Net Fixed Assets}}{\text{Capital Employed}}$

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Chapter - 5

Fund Flow Statement

- It's a statement of change in assets and liabilities of an enterprise.

- It is prepared to indicate how financial position has changed over a period

- ### Step By Step Approach

  - Schedule of change in Working Capital

  - Adjusted P/L A/c

  - Funds Flow statement

- ### Schedule of change in WC

S.No.	Particulars	Opening	Closing	↑ in WC	↓ in WC
(A)	Current Assets				
1.	Debtors				
2.	Cash etc.				
	Total				
(B)	Current Liabilities				
1.	Creditors				
2.	B/P etc				
	Total				
(C)	Working Cap. (A-B)				
(D.)	↑/↓ in WC				

Adjusted P/L A/c

Particulars	Amt. (₹)	Particulars	Amt. (₹)
To Non Cash Exp.		By Balance O/d	
To Non Operating Expenses		By Non Cash Income	
		By Non Operating Income	
To Balance c/d		By Funds From Operations	Bal. Fig.

Funds Flow Statement

Sources	Amt. (₹)	Applications	Amt. (₹)
Decrease in WC		Increase in WC	
Funds from Operations		Funds Lost in Operations	
Sale of Assets		Purchase of Asset	
Issue of share Capital		Redemption of Share Cap.	
Tax Refund		Tax Paid	
		D/D Paid	

Transactions Affecting FFS

• We are concerned with only those transactions from where the FLOW OF WC ARISES

• Any transaction which ↑ the amt. of WC is a SOURCE

• Any transaction which ↓ the amt. Of WC is an APPLICATION.

• WC ↑ if the transaction
  - increases CA
  - decreases CL

• WC ↓ if the transaction
  - decreases CA
  - increases CL

Chapter – 6

Cash Flow Statement

- It means the statement of change in Cash and Cash Equivalents.
- It is regulated as per AS:3 of ICAI.
- Meaning of Cash.

It comprises Cash in Hand & Demand Deposits with the banks.

- Meaning of Cash Equivalents.

These are short term highly liquid investments which are readily convertible into known amounts of cash & which are subject to insignificant risk of change in value.

Any investment will quality as cash equivalent only if it has short maturity of 3 months or less from date of acquisition. These are

- As per AS 3; these are
  - Cash in Hand
  - Cash at Bank
  - Marketable Securities
  - Bank Overdraft
  - Cash Credit

Cash Flows

- These are inflows & outflows of cash and cash equivalents

- Cash flow arises when net effect of transaction is to either ↑ or ↓ the amount of cash & cash equivalents.

- It arises from the transactions.

Division Into Activities

- ## Operating Activity

These are the principle revenue producing activities of enterprise and

other activities which are not investing or financing.

Activity	Non Financing Enterprise	Financing Enterprise
Int. Received		
D/D Received		
Int. Paid		
D/D Paid		

- ## Investing Activity

These are Acquisition & Disposal of Long Term Assets & other Investments

- ## Financing Activity

These are activities which result in change in size & composition of owner's capital & borrowings of enterprise.

Cash flow statement for year ending .... (Indirect Method)

Particulars	Amount (₹)
(A) Cash Flow from Operating Activity	
Surplus During The Year	
+ Non Cash & Non Operating Expenses	
− Non Cash & Non Operating Income	
= Cash from operations (Before wc changes)	
− Increase in Current Asset	
+ Decrease in Current Asset	
+ Increase in Current Liability	
− Decrease in Current Liability	
= Cash from Operations (Before Tax)	
− Tax Paid	
+/− Extraordinary Items	___
(B) Cash Flow from Investing Activity	
+ Sale of Asset / Investment	
− Purchase	___
(C) Cash Flow from Financing Activity	
+ Issue of Share Capital / Debenture	
− Interest / Dividend Paid	___
Net Cash & Cash Equivalents Generated During Year (A+B+C)	
+ Opening Balance of Cash & Cash Equivalents	
= Closing Balance of Cash & Cash Equivalents	___

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Cash flow statement (Direct Method)

- ## Cash flow from Operating Activity

      Cash sales

 +   Cash Received from Debtors

 -   Cash Purchases

 -   Cash Paid to Creditors

 -   Payment for operating expenses

 =   Cash Generated from operations

-   Income Tax Paid

+/-   Extra ordinary Items

TIME VALUE OF MONEY

- $$\begin{array}{c} \text{Future Value} \\ \text{of Money} \end{array} = \begin{array}{c} \text{Present value} \\ \text{of Money} \end{array} + \begin{array}{c} \text{Time Value} \\ \text{of Money} \end{array}$$

  $\underbrace{\text{Time Value of Money}}_{\text{Interest}}$

- Simple Interest $= P \times r \times t$

  P : Principal Amt.

  r : rate of interest

  t : time period

- Compound Interest $= P (1+r)^t$

- Effective Rate of Interest $= \left(1 + \dfrac{r}{m}\right)^m - 1$

  r : rate of interest P.a.

  m : no. of compoundings in a year

- Future Value of Annuity / Sinking Fund $= A \dfrac{(1+r)^n - 1}{r}$

  or $A \left[FVIFA (r\%, n)\right]$

  A : Periodic Amount

- Present value of Annuity $= \dfrac{A}{r} \left[1 - \dfrac{1}{(1+r)^n}\right]$

  or $A \left[PVIFA (r\%, n)\right]$

- Perpetuity (constant CFs) $= \dfrac{A}{r}$

- Perpetuity (Growing CFs) $= \dfrac{A}{r-g}$

Risk Analysis In Capital Budgeting

→ **Statistical Techniques**

$$NPV = \Sigma PVCI - \Sigma PV CO.$$

$$\downarrow$$

$$CF \times PV(r\%, n)$$

$$\downarrow$$

$$\Sigma (CF \times Prob)$$

$$Variance = \Sigma \left[(CF - \overline{CF})^2 \times P \right]$$

$$\sigma = \sqrt{Variance}$$

→ **Risk Adjusted Discount Rate**

$$RADR = R_f + Risk\ Premium.$$

→ **Certainty Equivalent Approach**

$$Certainty\ Equivalent\ Coefficient = \frac{Certain\ CF}{Risky\ CF}$$

Higher the CE; Lower is the Risk.

→ <u>Sensitivity Analysis</u>

. To find the impact of change in variable on the outcome of project i.e NPV.

→ <u>Scenario Analysis</u>

. To find the impact of change in more than one variable simultaneously on the outcome of project.

→ <u>Simulation</u>

. Determining range of random nos.

— For each variable ; finding cumulative prob. on the base of prob. given & specifying range of random nos

— fitting the random nos given in the Q

— finally, finding NPV. for each run

→ <u>Decision Tree</u>

. It's a graphical presentation of relationship b/w future decisions & their consequences.

Y1   Y2   Path   JP

- Computation of NPV

Path	Pv CF (Y_1)	Pv CF (Y_2)	Total PvCI	PvCo	NPv
1					
2					
3					
4					

- Computation of Exp. NPV

Path	NPv	JP	Exp. NPv
1			
2			
3			
4			

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Lease Financing

→ **Decision**   Buy   vs.   lease


```
              own        borrowed
              funds      funds
```
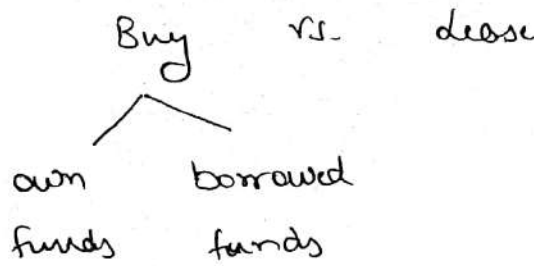
→ **Net Advantage of Leasing**

$$= \text{PVCO as per Buy Decision} - \text{PVCO as per lease}$$

```
                    +                    -
                    L                    B
```

→ **PVCO : Buy (own funds)**

Year end	Particulars	CF	PVF @ _%	PV CF
0	Cost of Asset	−		
1-n	Tax Sav. on Dep	+		
n	SV	+		

→ Pvco : Buy (Borrowed Funds)

Year end	Particulars	CF	Pvf @ __%	PvCF
0	Down Payment (Cost - Borrow)	-		
1-n	Tax Sav. on Dep	+		
1-n	Principal	-		
1-n	Int. (1-t)	-		
n	SV	+		

→ Pvco : Lease

Lease Rent (1 - t) × AF (r%, n)

→ If Discounting Rate; not given ⇒ Int. (1-t)

→ If amt. of installment not given

$$= \frac{\text{Amount of Loan}}{AF (r\%, n)}$$

Dividend Decisions

Gordon Model

$$P = \frac{E(1-b)}{k - (b \times r)}$$

E = Earning per share

P = Price Per Share

b = Retention Ratio

k = Cost of Capital

r = Rate of Return

Walter Model

$$P = \frac{D + \frac{r}{k}(E-D)}{k}$$

P = Price Per Share

D = D/d Per share

Traditional Model (Graham & Dodd Model)

$$P = m\left(D + \frac{E}{3}\right)$$

m = multiplier

Lintner Model

$$D_1 = D_0 + \left[(EPS \times Target\ Payout) - D_0\right] \times Af$$

Af = Adjustment Factor

MM Hypothesis

(1) computation of P_1

$$P_0 = \frac{D_1 + P_1}{1 + K}$$

P_0 = current selling price
D_1 = D/D at the end
P_1 = selling price after 1 year
K = cost of capital

(2) computation of m

$$mP_1 = I - (E - nD_1)$$

m = no. of new shares
I = Investment
E = Earning
n = no. of Existing shares

(3) value of firm

$$nP_0 = \frac{(n+m)P_1 - I + E}{1 + K}$$

All the above 3 steps are to be performed

(a) in Presence of D/D

(b) in Absence of D/D
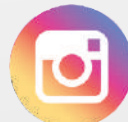
RAHUL GARG is an energetic professional and his distinguished & exceptional teaching style has made thousands of aspiring professionals to conquer their exams successfully.

Gold Medalist

All India Rankholder in CA, CS, CMA

Professional Qualifications

- ✓ B.Com (GGDSD College, P.U.)
- ✓ CS (ICSI)
- ✓ CA (ICAI)
- ✓ CMA (ICAI)
- ✓ CFA (ICFAI)
- ✓ DISA (ICAI)
- ✓ MBA (Finance)
- ✓ Adv. Dip. Mgt. (ICFAI)

Professional Journey

- ✓ AIR 1 (CMA Inter)
- ✓ AIR 3 (CMA Final)
- ✓ AIR 4 (CS Inter)
- ✓ AIR 13 (CS Final)
- ✓ AIR 41 (CA PE II)
- ✓ Distinction (CA PE I)
- ✓ Distinction (B. Com)

Awards & Achievements

- ✓ Covered by the National Magazine 'Career 360' amongst 12 National Toppers in 2010.
- ✓ Awarded by Mr. Atal Bihari Vajpayee for exceptional performance in academics

Boards & Committees

- ✓ Past Visiting Faculty at ICAI, Chandigarh
- ✓ Past Visiting Faculty at Chitkara University
- ✓ Past Joint Director (Coaching), ICAI (Cost)
- ✓ Past Secretary, ICAI (Cost)

As a Faculty

- ✓ Guiding the students of CA, CS, CMA for past 7 years
- ✓ Time Management Skills
- ✓ Stress Management Skills
- ✓ How to Attempt
- ✓ 1 Day Capsule

International Representations

Worked with International Firms & Business Advisors
- ✓ Grant Thornton
- ✓ Ernst & Young