PAPER – 2
ADVANCED FINANCIAL MANAGEMENT

QUESTIONS

Securitization

1. Grow More Ltd. an NBFC is in the need of funds and hence it sold its receivables to MAC Financial Corporation (MFC) for ₹ 100 million. MFC created a trust for this purpose called General Investment Trust (GIT) through which it issued securities carrying a different level of risk and return to the investors. Further, this structure also permits the GIT to reinvest surplus funds for short term as per their requirement.

   MFC also appointed a third party, Safeguard Pvt. Ltd. (SPL) to collect the payment due from obligor(s) and passes it to GIT. It will also follow up with defaulting obligor and if required initiate appropriate legal action against them.

   From the information given above, choose the correct answer to the following questions:

   I. The securitized instrument issued for ₹ 100 million by the GIT falls under category of .....

      (a) Pass Through certificate (PTCs)

      (b) Pay Through Security (PTS)

      (c) Stripped Security

      (d) Debt Fund.

   II. In the above scenario, the Originator is.....

      (a) Grow More Ltd.

(b) MAC Financial Corporation (MFC)

(c) General Investment Trust (GIT)

(d) Safeguard Pvt. Ltd.

III. In the above scenario, the General Investment Trust (GIT) is a/an.....

(a) Obligor

(b) Originator

(c) Special Purpose Vehicle (SPV)

(d) Receiving and Paying Agent (RPA)

IV. In the above scenario, the Safeguard Pvt. Ltd. (SPL) is a/an.....

(a) Obligor

(b) Originator

(c) Special Purpose Vehicle (SPV)

(d) Receiving and Paying Agent (RPA)

V. Which of the following statement holds true?

(a) When Yield to Maturity in market rises, prices of Principle Only (PO) Securities tend to rise.

(b) When Yield to Maturity in market rises, prices of Principle Only (PO) Securities tend to fall.

(c) When Yield to Maturity in market falls, prices of Principle Only (PO) Securities tend to fall.

(d) When Yield to Maturity in market falls, prices of Principle Only (PO) Securities remain the same.

International Financial Management

2. A US parent company has subsidiaries in France, Germany, UK and Italy. The amounts due to and from the affiliates is converted into a common currency viz. US dollar and entered in the following matrix.

Inter Subsidiary Payments Matrix (US $ Thousands)

		Paying affiliate				
		France	**Germany**	**UK**	**Italy**	**Total**
Receiving affiliate	France	---	80	120	200	400
	Germany	120	---	80	160	360
	UK	160	120	---	140	420
	Italy	200	60	120	---	380
	Total	480	260	320	500	**1560**

The treasurer of US Parent company is suggesting that by applying Multilateral Netting system the company can save a lot of transfer/ exchange costs. The company's Board agreed with Treasurer's proposal.

From the information given above, choose the correct answer to the following questions:

I. Before applying Multilateral Netting it is necessary to apply.....

(a) Unilateral Netting

(b) Bilateral Netting

(c) Multilateral Netting

(d) Interest Rate Swapping

II. Through Multinational Netting these transfers will be reduced to .....

(a) $ 50,000

(b) $ 100,000

(c) $ 150,000

(d) $ 200,000

III. The Net Payment/ Net Receipts for France after netting off shall be.....

(a) Net Receipt $ 40,000

(b) Net Payment $ 80,000

(c) Net Payment $ 40,000

(d) Net Receipt $ 80,000

IV. The Net Payment/ Net Receipts for Italy after netting off shall be.....

(a) Net Receipt $ 60,000

(b) Net Payment $ 120,000

(c) Net Payment $ 60,000

(d) Net Receipt $ 120,000

V. Suppose if the transfer charges are 0.01% of the amount transferred then by applying multilateral netting techniques there will be reduction in overall cost of transfer by .....

(a) US $ 136

(b) US $ 156

(c) US $ 1,360

(d) US $ 1,560

Advanced Capital Budgeting Decisions

3. SS Company is considering the replacement of its existing machine with a new machine. The Purchase price of the new machine is ₹ 26 Lakhs and its expected Life is 8 years. The company follows straight-line method of depreciation on the original investment (scrap value is not considered for the purpose of depreciation). The other expenses to be incurred for the New Machine are as under:

(i) Installation Charges ₹ 9,000

(ii) Fees paid to the consultant for his advice to buy New Machine ₹ 6,000.

(iii) Additional Working Capital required ₹ 17,000. (will be released after 8 years)

The written down value of the existing machine is ₹ 76,000, and its Cash Salvage Value is ₹ 12,500. The dismantling of this machine would cost

₹ 4,500. The Annual Earnings (before tax but after depreciation) from the New Machine would amount to ₹ 3,15,000. Income tax rate is 35%. The Company's required Rate of Return is 13%.

You are required to advise on the viability of the proposal.

PVIF (13%, 8) = 0.376 PVIFA (13%, 8) = 4.800

Security Valuation

4. R Ltd. has surplus cash of ₹ 100 lakhs and wants to distribute 27% of it to the shareholders. The company decides to buy back shares. The Finance Manager of the company estimates that its share price after re-purchase is likely to be 10% above the buyback price if the buyback route is taken. The number of shares outstanding at present is 10 lakhs and the current EPS is ₹ 3.

   You are required to suggest:

   (i) The price at which the shares can be re-purchased, if the market capitalization of the company should be ₹ 210 lakhs after buyback,

   (ii) The number of shares that can be re-purchased, and

   (iii) The impact of share re-purchase on the EPS, assuming that after buyback net income shall remain the same.

5. A hypothetical company ABC Ltd. issued a 10% Debenture (Face Value of ₹ 1000) of the duration of 10 years is currently trading at ₹ 850 per debenture. The bond is convertible into 50 equity shares being currently quoted at ₹ 17 per share.

   If yield on equivalent comparable bond is 11.80%, then determine the spread of yield of the above bond from this comparable bond.

   The relevant present value table is as follows.

Present Values	t_1	t_2	t_3	t_4	t_5	t_6	t_7	t_8	t_9	t_{10}
$PVIF_{0.11, t}$	0.901	0.812	0.731	0.659	0.593	0.535	0.482	0.434	0.391	0.352
$PVIF_{0.13\ t}$	0.885	0.783	0.693	0.613	0.543	0.480	0.425	0.376	0.333	0.295

Business Valuation

6. STR Ltd.'s current financial year's income statement reported its net income after tax as ₹ 50 Crore.

Following is the capital structure of STR Ltd. at the end of current financial year:

	₹
Debt (Coupon rate = 11%)	80 Crore
Equity (Share Capital + Reserves & Surplus)	250 Crore
Invested Capital	330 Crore

Following data is given to estimate cost of equity capital:

Asset Beta of TSR Ltd.	1.11
Risk –free Rate of Return	8.5%
Average market risk premium	9%

The applicable corporate income tax rate is 30%.

Estimate Economic Value Added (EVA) of RST Ltd. in ₹ lakh.

Derivatives Analysis & Valuation

7. (i) On 1 April 2015, Sunidhi was holding a portfolio of 10 securities whose value was ₹ 9,94,450, the weighted average of beta of 9 securities of the portfolio was 1.10.

Since she was expecting a fall in the prices of the shares in near future to hedge her portfolio, she sold 5 contract of NIFTY Futures (Multiplier of 25) expiring in May 2015, which was trading at 8767.07 on 1 April.

Required:

(1) Calculate the beta of the 10^{th} security.

(2) Reconcile the reasons in spite of 2% fall in the market as per Sunidhi's apprehension if she would have earned some profit on her cash position.

(ii) A Futures contract is available on R Ltd. that pays an annual dividend of ₹ 4 and whose stock is currently priced at ₹ 125. Each Futures contract calls for delivery of 1,000 shares to stock in one year, daily marking to market. The treasury bill rate is 8%.

Required:

(1) Given the above information, assess the price of one Futures contract.

(2) If the company stock price decreases by 6%, then what will be the price of one Futures contract?

(3) Suppose the company stock price decreases, then evaluate realizes gain or loss for an investor that has a long position in one Futures contract of R Ltd.

(Ignore margin and taxation, if any)

Interest Rate Risk Management

8. MPD Ltd. issues a ₹ 50 Million Floating Rate Loan on July 1, 2018 with resetting of coupon rate every 6 Months equal to LIBOR + 50 bps.

MPD is interested in an Interest rate Collar Strategy of selling a Floor and buying a cap.

MPD buys the 3 years cap and sell 3 years Floor as per the following details on July 1, 2018:

Principal Amount	₹ 50 Million
Strike Rate	5% for Floor & 8% for Cap
Reference Rate	6 months LIBOR
Premium	NIL, since premium paid for cap = premium received for Floor

The Reset dates & Interest rates p.a., on that dates are:

Reset Date	31/12/2018	30/06/2019	31/12/2019	30/06/2020	31/12/2020	30/06/2021
LIBOR (%)	7.00	8.00	6.00	4.75	4.25	5.25

Using the above data, you are required to determine:

(i) Effective Interest paid out at each six reset dates, (Round off to the nearest rupee)

(ii) Average overall effective rate of interest p.a. (round off to 2 decimals).

Note: Assume 365 days a year and 366 days for leap year.

Portfolio Management

9. Mr. NK has categorized all the available stock in the market into the following types:

(i) Small cap growth stocks

(ii) Small cap value stocks

(iii) Large cap growth stocks

(iv) Large cap value stocks

Mr. NK also estimated the weights of the above categories of stocks in the market index. Further, the sensitivity of returns on these categories of stocks to the three important factors are estimated to be:

Category of Stocks	Weight in the Market Index	Factor I (Beta)	Factor II (Book Price)	Factor III (Inflation)
Small cap growth	25%	0.80	1.39	1.35
Small cap value	10%	0.90	0.75	1.25
Large cap growth	50%	1.165	2.75	8.65
Large cap value	15%	0.85	2.05	6.75
Risk Premium		6.85%	-3.5%	0.65%

The rate of return on Treasury Bonds is 4.50%.

Required:

(i) Using Arbitrage Pricing Theory, determine the expected return on the market index.

(ii) Using Capital Asset Pricing Model (CAPM), determine the expected return on the market index.

(iii) Mr. NK wants to construct a portfolio constituting only the 'Small cap value' and 'Large cap growth' stocks. If the target beta for the desired portfolio is 1, suggest the composition of his portfolio.

Foreign Exchange Exposure and Risk Management

10. On 1st October, 2024 Mr. G, an exporter, enters into a forward contract with a Bank to sell USD 1,00,000 on 31st December 2024 at INR/USD 85.40. However, at the request of the importer, Mr. G received the amount on 30th November, 2024. Mr. G requested the bank take delivery of the remittance on 30th November, 2024 i.e. before due date.

The inter-bank rate on 30th November 2024 was as follows:

Spot INR/USD	85.22-85.27
One Month Premium	10/15

(i) If bank agrees to take early delivery then what will be net inflow to Mr. G.

(ii) If Mr. G can deploy these funds in USD and earn a return of 3% per annum, then advise which option will be better: delivery to the bank or investment in USD?

Note:

a. Assume 365 days in a year.

b. Assume the prevailing prime lending rate is 18% p.a. and term deposit rate is 12% p.a.

c. Round off calculations upto two decimal points.

11. XP Pharma Ltd., has acquired an export order for ₹ 10 million for formulations from a European company. The Company has also planned to import bulk drugs worth ₹ 5 million from a company in UK. The proceeds of exports will be realized in 3 months from now and the payments for imports will be due after 6 months from now. The invoicing of these exports and imports can be done in any currency i.e.

Dollar, Euro or Pounds sterling at company's choice. The following market quotes are available.

	Spot Rate	Annualised Premium
₹/$	87.10/87.20	$ - 7%
₹ /Euro	101.15/101.20	Euro - 6%
₹ /Pound	116.65/116.75	Pound - 5%

Advise XP Pharma Ltd. in which currency invoicing for both import and export should be opted for.

(Exchange Rate including calculations should be upto two decimal places).

Mergers, Acquisitions and Corporate Restructuring

12. X Ltd. is studying the possible acquisition of Y Ltd. by way of merger. The following data are available in respect of both the companies.

Particulars	X Ltd.	Y Ltd.
Market Capitalization (₹)	75,00,000	90,00,000
Gross Profit Ratio	20%	20%
Inventory Turnover Ratio	5 times	4 times
Debtor Turnover Ratio	3 times	5 times
12% Debenture (₹)	10,00,000	-
10% Debenture (₹)	-	14,40,000
No. of Equity Shares	1,00,000	60,000
Operating Expenses	86%	78%
Corporate Tax Rate	30%	30%
Closing Stock (₹)	15,00,000	5,00,000
Debtors (₹)	10,00,000	8,00,000

You are required to calculate:

(i) Swap ratio based on EPS & MPS respectively as weightage of 40% and 60%.

(ii) Post Merger EPS

(iii) Post Merger market price assuming same PE Ratio of X Ltd.

(iv) Post Merger gain or loss in EPS.

Mutual Funds

13. On 1st April 2024 Fair Return Mutual Fund has the following assets and prices at 4.00 p.m.

Shares	No. of Shares	Market Price Per Share (₹)
A Ltd.	20000	39.40
B Ltd.	100000	965.20
C Ltd.	20000	528.80
D Ltd.	200000	1349.80
E Ltd.	60000	51.80
No. of units of funds		1600000

Please calculate:

(a) NAV of the Fund on 1st April 2024.

(b) Assuming that on 1st April 2024, Mr. X, a HNI, send a cheque of ₹ 2 Crore to the Fund and Fund Manager immediately purchases 36000 shares of C Ltd. and balance is held in bank. Then what will be position of fund.

(c) Now suppose on 2nd April 2024 at 4.00 p.m. the market price of shares is as follows:

Shares	₹
A Ltd.	40.60
B Ltd.	1027.40
C Ltd.	581.60
D Ltd.	1343.80
E Ltd.	88.40

Then what will be new NAV.

Note: Round off all calculations upto two decimal points.

Financial Policy and Corporate Strategy

14. Following Financial data are available for PQR Ltd. for the financial year ending 2023:

	(₹ in lakh)
8% Debentures	125
10% Bonds (2022)	50
Equity Shares (₹ 10 each)	100
Reserves and Surplus	300
Total Assets	600
Assets Turnovers ratio	1.1
Effective interest rate	8%
Effective tax rate	40%
Operating margin	10%
Dividend payout ratio	16.67%
Current market Price of Share	₹ 14
Required rate of return of investors	15%

You are required to:

(i) Draw income statement for the year.

(ii) Calculate its sustainable growth rate of earnings.

Theoretical Questions

15. What do you mean by the term 'Pitch Presentation'. List out the points to be kept in mind while preparing a Pitch Presentation.

16. (a) Explain the various challenges to the Efficient Market Theory.

(b) Explain the reasons why conventional methods are not usefully deployed when valuing companies in distress?

OR

Explain the various actions of the Governments of the foreign (host) country by which Country Risk can be identified. Also explain how a company should assess this risk.

SUGGESTED ANSWERS/HINTS

Question No.		Answer
1.	I	(b)
	II	(b)
	III	(c)
	IV	(d)
	V	(b)
2.	I	(b)
	II	(d)
	III	(b)
	IV	(b)
	V	(a)

3. Working Notes:

(i) Computation of Annual Depreciation

Particulars	₹
Purchase Price	26,00,000
Add: 1. Installation Charges	9,000
2. Fees Paid to Consultant for Advice	6,000
Total Cost of New Machine	26,15,000
Useful Life	8 Years
Annual Depreciation (Total Cost/No. of Years)	3,26,875

(ii) Computation of Annual Cash Savings

Particulars	₹
Annual Earnings	3,15,000
Less: Tax @35%	1,10,250

Earning after Tax	2,04,750
Add: Depreciation on New Machine	3,26,875
Annual Cash Savings	5,31,625

(iii) Tax effect on sale of Old Machine

Particulars	₹
Proceeds of Sale	12,500
Less: Cost of Removal	4,500
Net Proceeds	8,000
Less: WDV	76,000
Net Loss due to Sale	68,000
Tax savings due to Loss on Sale @35%	23,800
Total Cash Inflow due to Sale (₹ 8,000+₹ 23,800)	31,800

Computation of Net Present Value

Particulars	Period	Cash Flow (₹)	PVF @13%	PV (₹)
(a) Annual Cash inflow after Tax	1-8	5,31,625	4.800	25,51,800
(b) Net Salvage Value of Existing Machine	0	31,800	1.000	31,800
(c) Working Capital Realized	8	17,000	0.376	6,392
Present Value of Cash Inflows				25,89,992
Less: 1. Initial Investment	0	26,15,000	1.000	26,15,000
2. Initial Working Capital	0	17,000	1.000	17,000
NPV of the Proposal				(42,008)

Decision: Since NPV of the project is negative it is not viable.

4. (i) Let P be the buyback price decided by R Ltd.

Market Capitalisation after Buyback

1.1P (Original Shares – Shares Bought Back)

$$= 1.1P\left(10\text{ lakhs} - \frac{27\%\text{ of }100\text{ lakhs}}{P}\right)$$

= 11 lakhs × P – 27 lakhs × 1.1 = 11 lakhs P – 29.7 lakhs

Again, 11 lakhs P – 29.7 lakhs

or 11 lakhs P = 210 lakhs + 29.7 lakhs

or P = $\frac{239.70}{11}$ = ₹ 21.79 per share

(ii) Number of Shares to be Bought Back:

$\frac{₹\ 27\text{ lakhs}}{₹\ 21.79}$ = 1.24 lakhs (Approx.) or 123910 share

(iii) New Equity Shares:

10 lakhs – 1.24 lakhs = 8.76 lakhs or 1000000 – 123910 = 876090 shares

$\therefore$ EPS = $\frac{3\times10\text{ lakhs}}{8.76\text{ lakhs}}$ = ₹ 3.43 or $\frac{3\times10\text{ lakhs}}{876090}$ = ₹ 3.42

Thus, EPS of R Ltd., increases to ₹ 3.43 or ₹ 3.42

5. Conversion Price = ₹ 50 x 17 = ₹ 850

Intrinsic Value = ₹ 850

Accordingly the yield (r) on the bond shall be:

₹ 850 = ₹ 100 PVAF (r, 10) + ₹ 1000 PVF (r, 10)

Let us discount the cash flows by 11%

850 = 100 PVAF (11%, 10) + 1000 PVF (11%, 10)

850 = 100 x 5.890 + 1000 x 0.352

= 91

Now let us discount the cash flows by 13%

850 = 100 PVAF (13%, 10) + 1000 PVF (13%, 10)

850 = 100 x 5.426 + 1000 x 0.295

= -12.40

Accordingly, IRR

$$11\% + \frac{90.90}{90.90 - (-12.40)} \times (13\% - 11\%)$$

$$11\% + \frac{90.90}{103.30} \times (13\% - 11\%)$$

= 12.76%

The spread from comparable bond = 12.76% - 11.80% = 0.96% or 96 bps.

6. First of all, to calculate Cost of Equity we shall compute the Equity Beta of STR Ltd. as follows:

$$\beta_a = \beta_e \left[\frac{E}{E + D(1-t)} \right]$$

$$1.11 = \beta_e \left[\frac{250}{250 + 80(1-0.30)} \right]$$

β_e = 1.36

then we shall compute the Cost of Equity as per CAPM as follows:

$k_e = R_f + \beta$ x Market Risk Premium

= 8.50% + 1.36 x 9%

= 8.50% + 12.24% = 20.74%

Cost of Debt (k_d) = 11% (1 – 0.30) = 7.70%

WACC (k_o) $= k_e \times \frac{E}{E+D} + k_d \times \frac{D}{E+D}$

$= 20.74 \times \frac{250}{330} + 7.70 \times \frac{80}{330}$

= 15.71 + 1.87 = 17.58%

Taxable Income = ₹ 50 Crore/(1 - 0.30)

= ₹ 7142.86 lakhs

Operating Income = Taxable Income + Interest

= ₹ 7142.86 lakhs + ₹ 880 lakhs

= ₹ 8022.86 lakhs

EVA = EBIT (1-Tax Rate) – WACC x Invested Capital

= ₹ 8022.86 lakhs (1 – 0.30) – 17.58% x ₹ 330 Crore

= ₹ 5616.00 lakhs – ₹ 5801.40 lakhs = - ₹ 185.40 lakhs

7. **(i)** (1) To compute the beta of 10th security first we shall compute overall weighted beta as follows:

Let weighted β of the Portfolio is w, then,

$$5 = \frac{994450}{8767.07 \times 25} \times w$$

w = 1.102 approximately

Let beta of 10th security is β then,

1.102 = 0.90 x 1.10 + 0.10 x β

β = 1.12

(2) The main reason for the profit in cash position might be due to reason that contrary to her expectation fall in the value of cash position there may be increase in value of cash position or decrease in the stock price may be lesser than 2%.

(ii) (1) Future Price = Spot + Cost of Carry – Dividend

= ₹ 125 + (₹ 125 x 0.08) – ₹ 4 = ₹ 131

Price of one future contract = 1000 share x ₹ 131 = ₹ 1,31,000

(2) Price decrease by 6%

Market Price = ₹ 125 x 94% = ₹ 117.50

Then, price of one future contract

= ₹ 117.50 + (₹ 117.50 x 0.08) – ₹ 4 = ₹ 122.90

= ₹ 122.90 x 1000 = ₹ 1,22,900

(3) If the investor has taken a long position, decrease in price will result in ***loss*** for the investor.

Amount of loss will be:

₹ 1,31,000 - ₹ 1,22,900 = ₹ 8,100

8. **(i)** The pay-off of each leg shall be computed as follows:

Cap Receipt

Max {0, [Notional principal x (LIBOR on Reset date – Cap Strike Rate) x (No. of days in settlement period/ 365)}

Floor Pay-off

Max {0, [Notional principal x (Floor Strike Rate – LIBOR on Reset date) x (No. of days in settlement period/ 365)}

Statement showing effective interest on each payment date.

Reset Date	LIBOR (%)	Date of Payment	Days	Interest Payment (₹) LIBOR+0.50%	Cap Receipts (₹)	Floor Pay-off (₹)	Effective Interest
31-12-2018	7.00	30-06-2019	181	18,59,589	0	0	18,59,589
30-06-2019	8.00	31-12-2019	184	21,42,466	0	0	21,42,466
31-12-2019	6.00	30-06-2020	182	16,16,120	0	0	16,16,120
30-06-2020	4.75	31-12-2020	184	13,19,672	0	62,842	13,82,514
31-12-2020	4.25	30-06-2021	181	11,77,740	0	1,85,959	13,63,699
30-06-2021	5.25	31-12-2021	184	14,49,315	0	0	14,49,315
Total			1096				98,13,703

(ii) Average Annual Effective Interest Rate shall be computed as follows:

$$\frac{98,13,703}{5,00,00,000} \times \frac{365}{1096} \times 100 = 6.54\%$$

9. (i) Method I

Stock's return

Small cap growth = 4.5 + 0.80 x 6.85 + 1.39 x (-3.5) + 1.35 x 0.65 = 5.9925%

Small cap value = 4.5 + 0.90 x 6.85 + 0.75 x (-3.5) + 1.25 x 0.65 = 8.8525%

Large cap growth = 4.5 + 1.165 x 6.85 + 2.75 x (-3.5) + 8.65 x 0.65 = 8.478%

Large cap value = 4.5 + 0.85 x 6.85 + 2.05 x (-3.5) + 6.75 x 0.65 = 7.535%

Expected return on market index

0.25 x 5.9925 + 0.10 x 8.8525 + 0.50 x 8.478 + 0.15 x 7.535 = 7.7526%

Method II

Expected return on the market index

= 4.5% + [0.1 x 0.9 + 0.25 x 0.8 + 0.15 x 0.85 + 0.50 x 1.165] x 6.85 + [(0.75 x 0.10 + 1.39 x 0.25 + 2.05 x 0.15 + 2.75 x 0.5)] x (-3.5) + [(1.25 x 0.10 + 1.35 x 0.25 + 6.75 x 0.15 + 8.65 x 0.50)] x 0.65

= 4.50 + 6.85 + (-7.3675) + 3.77 = 7.7525%.

(ii) Using CAPM,

Small cap growth = 4.5 + 6.85 x 0.80 = 9.98%

Small cap value = 4.5 + 6.85 x 0.90 = 10.665%

Large cap growth = 4.5 + 6.85 x 1.165 = 12.48%

Large cap value = 4.5 + 6.85 x 0.85 = 10.3225%

Expected return on market index

= 0.25 x 9.98 + 0.10 x 10.665 + 0.50 x 12.45 + 0.15 x 10.3225 = 11.33%

(iii) Let us assume that Mr. NK will invest X_1% in Small cap value stock and X_2% in Large cap growth stock

$X_1 + X_2 = 1$

$0.90\ X_1 + 1.165\ X_2 = 1$

$0.90\ X_1 + 1.165(1 - X_1) = 1$

$0.90\ X_1 + 1.165 - 1.165\ X_1 = 1$

$0.165 = 0.265\ X_1$

$$\frac{0.165}{0.265} = X_1$$

$0.623 = X_1$ and $X_2 = 0.377$

62.30% in Small cap value stocks 37.70% in Large cap growth stocks.

10. (i) If Bank agrees to take early delivery-

Working Notes -

(1) Swap Difference

Bank Sells at Spot Rate on 30th November 2024	₹ 85.22
Bank Buys at Forward Rate of 31st December 2024 (85.27 + 0.15)	₹ 85.42
Swap loss per US$	– ₹ 0.20
Swap loss for US$ 1,00,000 (1,00,000 x - ₹ 0.20)	₹ 20,000

(2) Interest on Outlay Funds

On 30th November Bank sells at	₹ 85.22
It buys from customer at	₹ 85.40
Outlay of Funds per US$	₹ 0.18
Interest on Outlay fund for US$ 1,00,000 for 31 days (US$100000 x ₹ 0.18 x 31/365 x 18%)	₹ 275.18

(3) Charges for early delivery

Swap loss	₹ 20,000.00
Interest on Outlay fund for US$ 1,00,000 for 31 days	₹ 275.18
Total charges of early delivery	₹ 20,275.18

Net Inflow to Mr. G

Amount received on sale (₹ 85.40 x 1,00,000)	₹ 85,40,000.00
Less: Charges for early delivery payable to bank	₹ 20,275.18
Net Inflow to Mr. G as on 30th November 2024	₹ 85,19,724.82

(ii) If Mr. G deploys these funds in US$, then inflow will be -

Receipt of US$ on 30th November 2024	US$ 1,00,000
Add: Interest for 31 Days $\left(1,00,000 \times 3\% \times \frac{31}{365}\right)$	US$ 254.79
US$ available on 31st December 2024 for sale	US$ 1,00,254.79

Sale of US$ 1,00,000 to bank as per agreed rate (₹ 85.40)	₹ 85,40,000.00
Sale of US$ 254.79 @ ₹ 85.32 i.e. Forward Rate	₹ 21,738.68
Amount of Inflows	₹ 85,61,738.68

If Mr. G deploys funds received in INR from Bank in term deposit then amount of inflows on 31st December 2025 will be -

Net Inflow to Mr. G as on 30th November 2024	₹ 85,19,724.82
Add: Opportunity Interest for 31 Days $\left(85,19,724.82 \times 12\% \times \frac{31}{365}\right)$	₹ 86,831.17
US$ available on 31st December 2024 for sale	₹ 86,06,555.99

Advice: In case if opportunity to invest funds in INR is available at term deposit rate then Mr. G should deliver the USD to the Bank 30th November and invest the INR funds.

11. (i) Proceeds of Exports in INR = ₹ 10 Million

Position of Inflow under three currencies will be as follows:

Currency	Invoice at Spot Rate	Expected Rate after 3-months	Conversion in INR after 3-months
$	₹ 100,00,000/₹ 87.10 = $ 1,14,810.56	₹ 87.10 (1 + 0.07/4) = ₹ 88.62	₹ 88.62 x $ 1,14,810.56 = ₹ 1,01,74,511.83
€	₹ 100,00,000/₹ 101.15 = € 98,863.07	₹ 101.15 (1 + 0.06/4) = ₹ 102.67	₹ 102.67 x € 98,863.07 = ₹ 1,01,50,271.40
£	₹ 100,00,000/ ₹ 116.65 = £ 85,726.53	₹ 116.65 (1 + 0.05/4) = ₹ 118.11	₹ 118.11 x £ 85,726.53 = ₹ 1,01,25,160.46

(ii) Payment of Import in INR = ₹ 5 Million

Position of outflow under three currencies will be as follows:

Currency	Invoice at Spot Rate	Expected Rate after 6-months	Conversion in INR after 6-months
$	₹ 50,00,000/ ₹ 87.20 = $ 57,339.45	₹ 87.20 (1 + 0.07/2) = ₹ 90.25	₹ 90.25 x $ 57,339.45 = ₹ 51,74,885.36
€	₹ 50,00,000/ ₹ 101.20 = € 49,407.11	₹ 101.20 (1 + 0.06/2) = ₹ 104.24	₹ 104.24 x € 49407.11 = ₹ 51,50,197.15
£	₹ 50,00,000/ ₹ 116.75 = £ 42826.55	₹ 116.75 (1 + 0.05/2) = ₹ 119.67	₹ 119.67 x £ 42,826.55 = ₹ 51,25,053.24

Advice: Since cash inflow is highest (₹ 101,74,511.83) in case of $ hence invoicing for Export should be in $. However, cash outflow is least (₹ 51,25,053.24) in case of £ the invoicing for import should be in £.

12. Working Notes:

(1) Inventory Turnover Ratio $= \frac{\text{COGS}}{\text{Closing Stock}}$

X Ltd.	**Y Ltd.**
$5 = \frac{\text{COGS}}{15,00,000}$	$4 = \frac{\text{COGS}}{5,00,000}$
COGS = ₹ 75,00,000	COGS = ₹ 20,00,000

Gross Profit Ratio = 20% means COGS is 80% of Sales, then

$\text{Sales} = \frac{75,00,000 \times 100}{80}$	$\text{Sales} = \frac{20,00,000 \times 100}{80}$
= ₹ 93,75,000	= ₹ 25,00,000

Statement of Profit

	X Ltd.	**Y Ltd.**
Sales	93,75,000	25,00,000
Less: Operating Exp.	80,62,500	19,50,000
EBIT	13,12,500	5,50,000
Less: Interest	1,20,000	1,44,000
EBT	11,92,500	4,06,000
Less: Tax@30%	3,57,750	1,21,800
EAT	8,34,750	2,84,200

(2)

	X Ltd.	**Y Ltd.**
No. of Shares	1,00,000	60,000
EPS (EAT/ No. of Shares)	8,34,750/1,00,000 = ₹ 8.34	2,84,200/60,000 = ₹ 4.74
Market Price Share (Market Capitalisation/No. Shares)	75,00,000/ 1,00,000 = ₹ 75	90,00,000/ 60,000 = ₹ 150
PE Ratio (MPS/ EPS)	75/8.34 = 8.99	150/4.74 = 31.65

(i) Swap Ratio = $\frac{\text{Target Co.}}{\text{Acquirer Co.}}$

	Acquirer Co. X Ltd.	Target Co. Y Ltd.	Weight
EPS	0.34	4.74	0.40
MPS	75	150	0.60

EPS	$\frac{4.74}{8.34} \times 0.40 =$	0.227
MPS	$\frac{150}{75} \times 0.60$	1.200
		1.427

(ii) Post Merger EPS

$$= \frac{EAT_X + EAT_Y}{\text{No. of Shares of Both Cos.}}$$

$$= \frac{8,34,750 + 2,84,200}{1,00,000 + (60,000 \times 1.427)}$$

$$= \frac{11,18,950}{1,85,620}$$

= 6.03

(iii) Post Merger market price assuming same PE of X Ltd.

MPS = PE x EPS

= 8.99 x 6.03

= ₹ 54.21

(iv) Gain or Loss to the share holders

	Pre-Merger EPS	Post Merger EPS
X Ltd.	₹ 8.34	₹ 6.99
Y Ltd.	₹ 4.74	₹ 6.99 x 1.427 = ₹ 9.97

While Shareholders of X Ltd. will lose EPS of ₹ 1.35 (₹ 8.34 - ₹ 6.99) per share the shareholders of Y Ltd. stands to gain EPS of ₹ 5.23 (₹ 9.97 - ₹ 4.74) per share.

13. (a) NAV of the Fund.

$$= \frac{₹\,7,88,000 + ₹\,9,65,20,000 + ₹\,1,05,76,000 + ₹\,26,99,60,000 + ₹\,31,08,000}{1600000}$$

$$= \frac{₹\,38,09,52,000}{1600000} = ₹\ 238.095 \text{ rounded to } ₹\ 238.10$$

(b) The revised position of fund shall be as follows:

Shares	No. of shares	Price	Amount (₹)
A Ltd.	20000	39.40	7,88,000
B Ltd.	100000	965.20	9,65,20,000
C Ltd.	56000	528.80	2,96,12,800
D Ltd.	200000	1349.80	26,99,60,000
E Ltd.	60000	51.80	31,08,000
Cash			9,63,200
			40,09,52,000

$$\text{No. of units of fund} = 1600000 + \frac{20000000}{238.10} = 1683998.32$$

(c) On 2nd April 2024, the NAV of fund will be as follows:

Shares	No. of shares	Price	Amount (₹)
A Ltd.	20000	40.60	8,12,000
B Ltd.	100000	1027.40	10,27,40,000
C Ltd.	56000	581.60	3,25,69,600
D Ltd.	200000	1343.80	26,87,60,000
E Ltd.	60000	88.40	53,04,000
Cash			9,63,200
			41,11,48,800

$$\text{NAV as on 2nd April 2024} = \frac{₹\,41,11,48,800}{1683998.32} = ₹\ 244.15 \text{ per unit}$$

14. (i) Income statement

	(₹ Lakhs)
Sale	660.00
Operating Exp	594.00
EBIT	66.00
Interest	14.00
EBT	52.00
Tax @ 40%	20.80
EAT	31.20
Dividend @ 16.67%	5.20
Retained Earnings	26.00

(ii) SGR = ROE (1-b)

$$ROE = \frac{PAT}{NW} \text{ and } NW = ₹100 \text{ lakh} + ₹300 \text{ lakh} = 400 \text{ lakh}$$

$$ROE = \frac{₹31.2 \text{ lakhs}}{₹400 \text{ lakhs}} \times 100 = 7.8\%$$

$$SGR = 0.078(1 - 0.1667) = 6.5\%$$

15. Pitch presentation is a short and brief presentation (not more than 20 minutes) to investors explaining about the prospects of the company and why they should invest into the startup business. So, pitch deck presentation is a brief presentation using PowerPoint to provide a quick overview of business plan and convincing the investors to put some money into the business. A pitch presentation can be made either during face-to-face meetings or online meetings with potential investors, customers, partners, and co-founders.

Here are some points to be kept in mind while preparing a pitch presentation:

(i) Introduction

(ii) Team

(iii) Problem

(iv) Solution

(v) Marketing/Sales

(vi) Projections or Milestones

(vii) Competition

(viii) Business Model

(ix) Financing

16. (a) Various challenges to the Efficient Market Theory are as follows:

(i) *Information inadequacy* – Information is neither freely available nor rapidly transmitted to all participants in the stock market. There is a calculated attempt by many companies to circulate misinformation.

(ii) *Limited information processing capabilities* – Human information processing capabilities are sharply limited. According to Herbert Simon every human organism lives in an environment which generates millions of new bits of information every second but the bottlenecks of the perceptual apparatus does not admit more than thousand bits per seconds and possibly much less.

David Dreman maintained that under conditions of anxiety and uncertainty, with a vast interacting information grid, the market can become a giant.

(iii) *Irrational Behaviour* – It is generally believed that investors' rationality will ensure a close correspondence between market prices and intrinsic values. But in practice this is not true. J. M. Keynes argued that all sorts of consideration enter into the market valuation which is in no way relevant to the prospective yield. This was confirmed by L. C. Gupta who found that the market evaluation processes work haphazardly almost like a blind man firing a gun. The market

seems to function largely on hit or miss tactics rather than on the basis of informed beliefs about the long term prospects of individual enterprises.

(iv) *Monopolistic Influence* – A market is regarded as highly competitive. No single buyer or seller is supposed to have undue influence over prices. In practice, powerful institutions and big operators wield great influence over the market. The monopolistic power enjoyed by them diminishes the competitiveness of the market.

(b) Conventional methods are not usefully deployed when valuing companies in distress as:

- Discounted cashflow valuation method required terminal value calculation which is based upon an infinite life and ever-growing cashflows. However, the assumption of perpetuity of cash flows may not be relevant in case of distressed firm because of negative cash flows.
- A distressed firm generally has negative and declining revenues hence expects to lose money for some more time in the future. For such firms, estimating cash flows is difficult, since there is a high risk of bankruptcy. For firms expected to fail, DCF does not work very well, since DCF values a firm as a going concern – even if the firm is expected to survive, projections have to be made until the cash flows turn positive, else the DCF would yield a negative value for equity or firm.
- Discount rates used in conventional methods reflect companies which are operationally as well as financially sound. They have to be adjusted for the probabilities of failures of the companies to be used in case of distressed companies.

OR

From the following actions by the Governments of the host country this risk can be identified:

1. Insistence on resident investors or labour.
2. Restriction on conversion of currency.
3. Expropriation of foreign assets by the local govt.
4. Price fixation of the products.

Since this risk mainly relates to investments in foreign country, company should assess country risk.

(1) By referring political ranking published by different business magazines.

(2) By evaluating country's macro-economic conditions.

(3) By analysing the popularity of current government and assess their stability.

(4) By taking advises from the embassies of the home country in the host countries.