Paper 14 – Strategic Financial Management

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Full Marks: 100 **Time allowed:3 hours**

This paper contains two sections **A** and **B** . **Section A** is compulsory and contains question No.1 for 20 marks. **Section B** contains question Nos. 2 to 8, each carrying 16 marks.
Answer any five questions from **Section B**.

Section – A [20 Marks]

1. Choose the correct option among four alternative answer. (1 mark for correct choice, 1 mark for justification.) [10×2=20]

(a) A mutual fund has an NAV of ₹12.50 per unit at the beginning of the year. At the end of the year the NAV increases to ₹13.40. In the meanwhile, the Fund distributes ₹0.85 as dividend and ₹0.70 as capital gains. What will be the fund's rate of return during the year?

A. 18.6%

B. 19.6%

C. 20.6%

D. 21.6%

(b) Which of the following is not a source of systematic risk?

A. Market Risk

B. Interest rate risk

C. Purchasing power risk

D. Financial risk

(c) A project had an equity beta of 1.40 and was going to be financed by a combination of 30% debt and 70% equity. Assuming debt-beta to be zero, the project beta is:

A. 0.68

B. 0.78

C. 0.88

D. 0.98

(d) CNX Nifty is currently quoting at 9200. Each lot is 55. An investor purchases a March Futures contract at 9300. He has been asked to pay 7% margin. What amount of initial margin is required to be deposited by him? To what level Nifty futures should be increased to get a gain of 6%?

A. ₹35805, 9339.05

B. ₹35000, 9939.05

C. ₹36805, 9539

D. ₹40000, 9400

(e) The stock of ABC Ltd. sells for ₹240. The present value of exercise price and the value of call option are ₹217.40 and ₹39.60 respectively. What is the value of put option?

A. ₹16.50

B. ₹22.00

C. ₹17.00

D. ₹18.00

(f) An investor holds two equity shares A and B in equal proportion with the following risk and return:

E (RA) = 26% σ_A = 20% E(RB) = 22% σ_B = 24% The returns of these securities have a positive correlation of 0.7. The portfolio risk will be_____.

A. 20.30%

B. 21.67%

C. 19.49%

D. 17.15%

(g) From the following quotes of a bank, determine the rate at which Yen can be purchased with Rupees.

₹/£ Sterling: 75.31 – 33; £ Sterling/Dollar ($): 1.563 – 65;

Dollar ($)/Yen (¥): 1.048/52 [per 100 Yen]

A. ₹124.02

B. ₹142.02

C. ₹412.02

D. ₹214.02

(h) A company has obtained quotes from two different manufacturers for an equipment. The details are as follows:

Make X: Cost ₹4.5 million with estimated life of 10 years

Make Y: Cost ₹6.0 million with estimated life of 15 years

Ignore maintenance and operation cost. Which one would be cheaper? Company's cost of capital is 10%. PVIFA (10%, 10) = 6.1446; PVIFA (10%, 15) = 7.6061

A. Make X will be cheaper

B. Make Y will be cheaper

C. Cost will be the same

D. None of the above

(i) Consider the following for Strong Ltd.

Return on Govt. Securities = 12%

Share beta = 1.5

Market return = 16%

Based on CAPM, cost of equity will be_____.

A. 28%

B. 22%

C. 18%

D. 12%

(j) The 6-month forward rate for US dollar against rupee is quoted at ₹49.50 as opposed to a spot price of ₹48.85. The forward premium on US dollar is

A. 1.50%

B. 3.08%

C. 3.05%

D. 3.03%

Answer:

1. (a) Correct Option is B

Rate of return = ×100 = 19.6%

(b) Correct option is D

Financial risks arise when companies resort to financial leverage or use of debt financing. The more the company resorts to debt finance, the greater is the financial risk. Financial risk is an unsystematic risk, which can be diversified.

(c) Correct option is D

Project beta = equity beta × weight of equity + debt beta × weight of debt
= 1.4 × 70% + 0 × 30% = 0.98.

Here taxation has been ignored in calculating weights as the rate is not given.

(d) Correct option is A

Initial margin = (7% × 9300 × 55) = 35805.

Gain = 6%

Return (6% of Initial margin) = 2148

Return per unit = 2148/55 = 39.05

Index value should rise to = 9300 + 39.05 = 9339.05.

(e) Correct option is C

Value of call option + P.V of exercise price = Spot rate - Value of put option

Or, 39.60 + 217.40 = 240 + Value of put option

Value of put option = ₹ 17

(f) Correct option is A

Port folio variance = $20^2\,0.5^2 + 24^2\,0.5^2 + 2 \times 0.5 \times 0.5 \times 20 \times 24 \times 0.7 = 412$

Port folio risk = $\sqrt{412} = 20.30\%$

(g) Correct option is A

Ask (₹ / ¥) = Ask (₹ /£) × Ask (£/$) × Ask($/¥) = 75.33 × 1.565 × 1.052 = ₹124.02

(h) Correct Option is A

Equivalent annuity = Cost / PVIFA

Equivalent Annuity for X = 4.5 million / PVIFA (10%,10) = 4500000/6.1446 = ₹732350

Equivalent Annuity for Y = 6 million / PVIFA (10%,15) = 6000000/7.6061 = ₹788840

So, X is cheaper.

(i) Correct option is C

Cost of equity = $R_f + \beta(R_m - R_f)$ = 12+1.5(16-12) = 18%

(j) Correct Option is D

Forward premium (annualized) = $\frac{\text{Forward rate} - \text{spot rate}}{\text{spot rate}} \times 12/6 \times 100$

$= \frac{49.50 - 48.55}{48.55} \times 12/6 \times 100 = 2.66\%$

Section – B

Answer any *five* questions **[80 Marks]**

2. (a) Eureka Enterprises is interested in assessing the cash flows associated with the replacement of the old machine by a new machine. The old machine has a book value of ₹ 2,70,000 which can be sold for the same amount. It has a remaining life of 5 years, after which the salvage value is expected to be *'nil'*. It is being depreciated annually @ 10% using the written down value method.

The new machine costs ₹12 lakhs and has a resale value of ₹7.5 lakhs at the end of 5 years. The new machine is expected to save manufacturing costs of ₹3 lakh p,a. Investment in working capital remains same. The tax rate applicable to the firm is 50%.

You, as a Project Analyst, are required to work out the incremental cash flows associated with the replacement of the old machine and to prepare a statement to be presented to the management for consideration.

(b) Nomura Projects Ltd. is considering accepting one of two mutually exclusive Projects, Project P & Project Q. The cash flow and probabilities are estimated as under:

Project P		Project Q	
Probability	**Cash flow (₹000)**	**Probability**	**Cash flow (₹000)**
0.10	**6,000**	**0.10**	**4,000**
0.20	**7,000**	**0.25**	**6,000**
0.40	**8,000**	**0.30**	**8,000**
0.20	**9,000**	**0.25**	**10,000**
0.10	**10,000**	**0.10**	**12,000**

Advise Nomura Projects Ltd. (Use Coefficient of Variation). [8+8=16]

Answer:

2. (a)

Cash outflow	(₹ lakhs)
Cost of the machine (new)	12.00
Less: Sale value of old machine	(2.70)
	9.30

Incremental Depreciation		(₹ lakhs)
Year	WDV	Depreciation (@ 10%)
1	9.3000	0.9300
2	8.3700	0.8370
3	7.533	0.7533
4	6.7797	0.6780
5	6.1017	0.6101

Statement Showing Incremental Cashflows and CFAT associated with Replacement of Old Machine with a New Machine

(₹ lakhs)

Particulars	Year 1	Year 2	Year 3	Year 4	Total	
Savings in manufacturing cost	3.0000	3.0000	3.0000	3.0000	3.0000	
Less: Incremental depreciation	0.9300	0.8370	0.7533	0.6780	0.6101	
Incremental taxable income	2.07	2.163	2.2467	2.322	2.3899	
Less: Tax @ 50%	1.035	1.0815	1.12335	1.161	1.19495	
Incremental earning after tax (EAT)	1.035	1.0815	1.12335	1.161	1.19495	
CFAT (EAT + Depreciation)	1.965	1.9185	1.87665	1.839	1.80505	
Add :Salvage value	-	-	-	-	7.5000	
Total Incremental CFAT	1.965	1.9185	1.87665	1.839	9.30505	16.9042
Less :Cash outflows						9.3000
Incremental net cash flows						7.6042

Suggestion: In view of positive incremental net cash flows, it is suggested to replace the existingmachine.

2. (b) Calculation of Standard Deviation Project P

P	X	EV = P×X	(x-x) ('000)	(x -)²	P(x -)²
0.10	6,000	600	-2	4	0.4
0.20	7,000	1400	-1	1	0.2
0.40	8,000	3200	0	0	0
0.20	9,000	1800	1	1	0.2
0.10	10,000	1000	2	4	0.4
		= 8,000			Variance = 1.2

Standard Deviation (σ) = $\sqrt{1.2}$ = 1.095

Coefficient of Variation = σ/EV × 100 = 1.095/8 ×100 = 13.68%

Calculation of Standard Deviation Project Q

P	X	EV = P×X	(x-x) ('000)	(x -)²	P(x -)²
0.10	4,000	400	-4	16	1.6
0.25	6,000	1500	-2	4	1
0.30	8,000	2400	0	0	0
0.25	10,000	2500	2	4	1
0.10	12,000	1200	4	16	1.6
		= 8,000			Variance = 5.2

Standard Deviation (σ) = $\sqrt{5.2}$ = 2.28

Coefficient of Variation = σ/EV × 100 = 2.28/18 × 100 = 28.58%

Analysis - Project Q is riskier as it is more susceptible to wider degree of variation around the most likely outcome than Project P. Therefore, Project P should be preferred.

3. (a) Find out the NAV per unit from the following information:

Particulars	
Size of the scheme	**₹200 lakh**
Face value of the shares	**₹100**
No. of outstanding shares	**200000**
Market value of the fund's investment	**₹360 lakh**
Receivables	**₹4,00,000**
Liabilities	**₹2,00,000**

(b) Mr. P has invested in three mutual fund schemes as per the details below:

	MF 1	MF 2	MF 3
Date of investment	**01.12.2017**	**01.01.2018**	**01.03.2018**
Amount of investment (₹)	**1,00,000**	**2,00,000**	**1,00,000**
NAV at entry date (₹)	**21.00**	**20**	**20**
Dividend received up to 31.03.18 (₹)	**1,940**	**3,040**	**Nil**
NAV as at 31.03.2018 (₹)	**20.80**	**20.20**	**19.60**

What is the effective yield on per annum basis in respect of each of the three schemes up to 31.03.2018? [6+10=16]

Answer:

(a)

Total Assets = Market Value of Fund's Investments+ Receivables = ₹ 360 Lakhs + ₹ 4 Lakhs = ₹ 364 Lakhs

Liabilities = ₹ 2 Lakhs

No. of shares = 2 Lakhs

Net Asset Value = (Total Assets – Liabilities) / No. of shares = ₹ (364 – 2) Lakhs/ 2 Lakhs = ₹ 181.00

(b) Calculation for return

Schemes	Investment (₹)	NAV on entry date	No. of units	Nav on 31.03.18	Total NAV on 31.03.18	Net NAV
(1)	(2)	(3)	(4) = (2)/(3)	(5)	(6) = (4)×(5)	(7) = (2)-(6)
MF 1	100000	21	4761.905	20.80	99047.624	-952.376
MF 2	200000	20	10000	20.20	202000	2000
MF 3	100000	20	5000	19.60	98000	-2000

Total yield = Net NAV + Dividend

Effective Yield % = (Total yield /Investment) × (365/No. of days holding) × 100

Schemes	Dividend (₹)	Total Yield	No. of days	Effective yield% p.a
MF 1	1940	987.624	121	2.98
MF 2	3040	5040	90	10.22
MF 3	0	-2000	31	-23.55

4. (a) On the basis of the following information, compute covariance between the returns on a pair of securities according to the Sharpe single-index model:

(i) Beta for stock A = 1.183

(ii) Beta for stock B = 1.021

(iii) Beta for stock C = 2.322

The variance of the market portfolio = 20.91

(b) Annual return data are presented below for Stock X and the S&P Nifty Index for 12 years. Calculate the following:

(i) The average return on stock X

(ii) The average return on the market

(iii) The variance and standard deviation of the stock X's return

(iv) The variance and standard deviation of the market portfolio's return

(v) The covariance of the returns on stock X and the market portfolio

(vi) The correlation coefficient of the returns on stock X and the market portfolio

(vii) Beta for Stock X

(viii) Alpha for Stock X

YEAR	STOCK-X (%)	S&P Nifty (%)
2006	12.05	12.28
2007	15.27	5.99
2008	- 4.12	2.41
2009	1.57	4.48
2010	3.16	4.41
2011	- 2.79	4.43
2012	-8.97	-6.77
2013	- 1.18	-2.11
2014	1.07	3.46
2015	12.75	6.16
2016	7.48	2.47
2017	-0.94	- 1.15

[6+10=16]

Answer:

4. (a)

According to the Sharpe single-index model, the covariance between the returns on a pair of stocks is:

$$\text{SIM}\sigma_{ij} = \beta_i\beta_j\sigma_m^2$$

Using the betas for stocks A and B along with the variance of the market portfolio we have:

$$\text{SIM}\sigma_{AB} = 1.183 \times 1.021 \times 20.91 = 25.254$$

Similarly:

$$\text{SIM}\sigma_{AC} = 1.183 \times 2.322 \times 20.91$$
$$= 57.438$$

$$\text{SIM}\sigma_{BC} = 1.021 \times 2.322 \times 20.91$$
$$= 49.573$$

(b) Calculation for average, variance and correlation coefficient

Year	Return on X (RX)	Return on Nifty (RM)	$(RX-\overline{RX})^2$	$(RM-\overline{RM})^2$	$(RX-\overline{RX})(RM-\overline{RM})$
2006	12.05	12.28	82.88585	86.02563	84.44114583
2007	15.27	5.99	233.1729	35.8801	91.4673
2008	-4.12	2.41	16.9744	5.8081	-9.9292
2009	1.57	4.48	2.4649	20.0704	7.0336
2010	3.16	4.41	9.9856	19.4481	13.9356
2011	-2.79	4.43	7.7841	19.6249	-12.3597
2012	-8.97	-6.77	80.4609	45.8329	60.7269
2013	-1.18	-2.11	1.3924	4.4521	2.4898
2014	1.07	3.46	1.1449	11.9716	3.7022
2015	12.75	6.16	162.5625	37.9456	78.54
2016	7.48	2.47	55.9504	6.1009	18.4756
2017	-0.94	-1.15	0.8836	1.3225	1.081
Total	35.35	36.06	655.6625	294.4828	339.6042458
Average	2.945833	3.005			

i. The average return on x = 35.35/12 = 2.945833%

ii. The average return on market = 36.06/12 = 3.005%

iii. The variance of stock return = 655.6625/12 = 54.64 and S.D = $\sqrt{54.64}$ = 7.4%

iv. The variance of market return = 294.4828/12 = 24.54 and S.D = $\sqrt{24.54}$ = 5%

v. Correlation coefficient = $\frac{339.6042458/12}{7.4 \times 5}$ = 0.76

vi. Beta for stock x = covariance/variance of market return = $\frac{339.6042458/12}{24.54}$ =1.15

vii. Alpha for x = 2.945833 – {1+1.15(3.005-1)} = - 0.359917%

5. (a) Calculate the theoretical price of 3-month ACC futures, if ACC (FV ₹10) quotes ₹520 on NSE, and the 3-month futures price quotes at ₹532, and the borrowing rate is given as 15% and the expected dividend is 25% payable before expiry. Is there any arbitrage opportunities? If the market price of futures is ₹542, do arbitrage opportunities still exist?

(b) The following information is available:

Strike price ₹200;

Current stock price ₹185

Risk free rate of interest 5% p.a.

You are required to:

(i) Calculate the theoretical minimum price of a European put option after 6 months.

(ii) If European put option price is ₹5, then how can an arbitrageur make profit.

[8+8=16]

Answer:

5. (a)

Theoretical price of a 3-month futures contract

= Spot price + Cost of Carry - Dividend

= 520 + (520 x 0.15 x 0.25) – (25% of FV ₹10)

= 537

Actual futures price: ₹ 532

Since the fair value of futures contract is more than actual futures price, the futures contract is undervalued in the market. Hence arbitrageur would buy the futures contract and sell stock in cash market.

Activity today	₹	Activity at expiry	₹	Net
Buy futures	532	Sell futures	F_T	F_T -532
Sell stock	520	Buy stock	S_T	520 - S_T
Deposit sale proceeds		Received	19.50 (= 520×0.15×0.25)	19.50
Net gain at expiry	= F_T -532 + 520 - S_T + 19.50; since F_T would converge with S_T, at expiry, they would cancel out			7.50

No dividend is received as stock was sold. Margins, commissions and all transactions costs are ignored.

Actual futures price: ₹ 542

Since the fair value of futures contract is less than actual futures price, the futures contract is overvalued in the market. Hence arbitrageur would sell the futures contract and buy stock in cash market.

Activity today	₹	Activity at expiry	₹	Net
Sell futures	542	Buy futures	F_T	542 -F_T
Buy stock	520	Sell stock	S_T	S_T - 520
Dividend received		On or before expiry	2.50	2.50
Fund stock purchase		Paid	19.50	-19.50
Net gain at expiry	= 542 -F_T + S_T – 520 + 2.50 - 19.50; since F_T would converge with S_T, at expiry, they would cancel out			5.00

Margins, commissions and all transactions costs are ignored.

Arbitrageurs make profit in either situation. The things are not so rosy in practical life. In practice, however, transactions costs like margin funding, commissions, brokerage, securities transaction tax etc. kill the arbitrage opportunities.

(b)

1. Computation of Theoretical Minimum Price Particulars Value

Exercise price = ₹ 200

Current Stock Price = ₹ 185

Risk Free Rate of Return (r) = 5% or 0.05

Time (in years) = 6 ÷ 12 = 0.5

Theoretical Minimum Price

= Present Value of Exercise Price - Current Stock Price = $200 \times e^{-rt} - 185$

= $200 \times e^{-0.05\times0.5} - 185 = (200 \times 0.9753) - 185 = 195.0611 - 185 = 10.0611$

Inference: Since the Value of Put Option is more than the price of the Put Option, it is under-priced and the recommended action will be to Buy the Put Option.

2. Cash Flows to make Profit for the Arbitrageur Activity Flow:

The steps are: 1. Arbitrageur can borrow the amount required to buy the Put Option and Stock at the rate of 5% p.a. for 6 months. 2. Buy Put Option. 3. Take the opposite position and buy stock at spot price. 4. At the end of six months, exercise the Put option and realise the receipts. 5. Pay the amount of Borrowing together with Interest.

i.e. 1. Borrow at the rate of 5% for 6 months [185+5] = ₹ 90

2. Buy Put Option = ₹ 5

3. Buy Stock at Spot Price ₹ 185

4. Exercise the Put Option and realise the Sale Proceeds = ₹ 200

5. Repay the amount of Borrowing together with Interest [190 e0.05×0.5]=[190×1.02532]= ₹ 194.81
6. Net Gain made = ₹ (200 -194.81) = ₹ **5.19**

Note: The amount of gain is the minimum amount and will increase with every increase in Spot Price as on the Exercise Date.

6. (a) Given the following:

$/£	**1.3672/1.3710**
S.Fr./DEM	**1.0032/1.0080**
$/S.Fr.	**0.8792 / 0.8805**
And if DEM / £ in the market are 1.5560 /1.5576.	

Find out if any arbitrage opportunity exists. If so, show how $10,000 available with you can be used to generate risk - less profit.

(b) Given the following information:

Spot Rate	**₹46.88/$**
3 Month Forward Rate	**₹47.28/$**
3 Month Interest Rate in US	**7% p.a.**
3 Month Interest Rate in India	**9% p.a.**

Assuming no transaction cost or taxes exist, what operation would be carried out to take the possible arbitrage gain?

Assume ₹10 million or $ 10 million borrowings (as the case may be) to explain your answer.

[8+8=16]

Answer:

6. (a)

Calculation of Cross Rate

(i) Bid [DEM / £] = Bid [$ / £] x Bid [S Fr. / $] x Bid [DEM / S Fr.]

= Bid [$ / £] X 1 / Ask [$ / S Fr.] X 1 / Ask [S Fr. / DEM)

=1.3672 x 1 / 0.8805 x 1 / 1.0080 = 1.54004

(ii) Ask [DEM/£] = Ask [$ / £] X Ask [S Fr./$] X Ask [DEM / S Fr.]

= Ask [$ / £] X 1/ Bid [$ / S Fr.] X 1 / Bid [S Fr. / DEM]

= 1.3710 x 1/0.8792 x 1/1.0032 = 1.55439

So, cross rate is DEM/**£ = 1.5404/1.55439. Since market rate is** DEM/**£ = 1.5560/1.5576, arbitrage opportunity exists.**

Arbitrage Process:

1. Sell US $10000 @ 1.3710 to receive £7293.95
2. Sell £ at DEM/£= 1.5560 to receive (7293.95*1.5560) = DEM 11349.39
3. Sell DEM @ 1.0032 to receive S.Fr = (11349.39*1.0032) = S. Fr 11385.71
4. Sell S.Fr @0.8792 to receive (11385.71*0.8792) = US$ 10010.31
5. Arbitrage gain = (10010.31 – 10000) = US$ 10.31

(b) Here, $(1+r_h) = 1+(0.09\times3/12) = 1.0225$

$F_{1/}e_o\ (1+r_f) = 47.28/46.88\ [1+(0.07\times3/12)] = 1.0262$

Since the above two are not equal, arbitrage opportunity exists.

Here $F_{1/}e_o\ (1+r_f)$ is higher, so money will move from home country (India) to foreign country (US).

Covered Interest Arbitrage Process:

1. borrow ₹ 10 million from India at 9% p.a. for 3 months. Amount payable after 3 months = 10×1.0225 = ₹10.225 million.
2. Convert into foreign currency at spot rate to receive $(10.225/46.88) = $0.21811 million.
3. Invest in US at 7% p.a. for 3 months.
4. Receive 0.21811×[1+(0.07×3/12)] = $0.22193
5. Convert at forward rate to receive (0.22193×47.28) = ₹ 10.4929 million.
6. Repay ₹10.225 million
7. Net gain = 10.4929 – 10.225 = ₹ 0.2679 million.

7. (a) LB Ltd. Has decided to acquire machine M costing ₹63,000. It will have an operational life of 4 years, with nil scrap value.

Tax is payable at 30% on operating cash flows in the same year. Capital allowances are available at 25% a year under reducing balance method.

The company has the opportunity either to purchase the machine or to lease it under a finance lease arrangement, at an annual rent of ₹20,000 for four years, payable at the end of the year. The company can borrow to finance the acquisition at 10%.

Should the company lease or buy the machine?

(b) The expected return of Stock M has the following probability distribution:

Demand of company's product	Probability (P)	Rate of Return (R) (%)
Weak	0.2	(12)
Average	0.5	25
Strong	0.3	30

Calculate the stock's expected return, standard deviation and coefficient of variation.

[10+6=16]

Answer:

7. (a) Calculation for tax benefit

Year	Depreciation	w.d.v	Tax benefit @ 30%
1	25% of 63000 = 15750	47250	4725
2	25% of 47250 = 11813	35437	3544
3	25% of 35437 = 8859	26578	2658
4	26578	0	7973

Marginal cost of capital = 10(1-0.3) = 7%

Evaluation of purchase vs. lease option

Year	CF if purchased	CF for lease = 20000 × (1-.30)	Differential CF	Discount factor @ 7%	DCF
0	-63000	0	-63000	1	-63000
1	4725	-14000	18725	0.9346	17500
2	3544	-14000	17544	0.8734	15323
3	2658	-14000	16658	0.8163	13598
4	7973	-14000	21973	0.7629	16763
					184

Buying is cheaper by ₹ 184 in terms of present value.

(b) Calculation for expected return, S.D and Coefficient of Variation

Demand	Probability (P)	Return (R) (%)	P*R	P*R²
Weak	0.2	-12	-2.4	28.8
Average	0.5	25	12.5	312.5
Strong	0.3	30	9	270
	1.0		19.1	611.3

Expected Return = $\sum P \times R$ = 19.1%

Variance = $\sum P \times R^2 - \left(\sum P \times R\right)^2$ = 611.3 – $(19.1)^2$ = 246.49

S.D = $\sqrt{246.49}$ = 15.7%

Coefficient of variation = S.D/Expected return ×100 = 15.7/19.1×100 = 82.20%

8. Write short note on (any four) **[4×4=16]**

(a) Advantages of Depository System

(b) Benefits of Commodity Trading

(c) Objectives of Risk Management

(d) Money Market Mutual Funds

(e) Foreign Currency Convertible Bonds

Answer:

(a) Advantages of Depository System

Advantages:

(1) Immediate Transfer and Registration: In the depository environment, once the securities are credited to the investors account on payout, he becomes the legal owner of the securities, without any requirement to register with the Company's Registrar. Securities are held in a safe and convenient manner.

(2) Short Settlement cycle: The exclusive demat segments follow rolling settlement cycle of T + 2, i.e. the settlement of trades will be on the 2nd working day from the trade day. This will enable faster turnover of stock, faster disbursement of non-cash corporate benefits like rights, bonus, etc. and also more liquidity with the investor.

(3) Low Transaction Cost:

(a) No Stamp Duty: No stamp duty attached to any kind of securities in the depository. This waiver extends to Equity Shares, Debt Instruments and Units of Mutual Funds, thereby lowering the transaction cost / charges.

(b) Lower Operating Cost: Depository System provides the benefit of dealing in dematerialized securities and hence reduces the cost of back office cost of handling paper and also eliminates the risk of introducing the Broker.

(4) Reporting: Depository System facilitates obtaining periodic status reports to investors on their holdings and transactions, leading to better controls.

(5) Elimination of bad deliveries: In a depository environment, once holdings of an investor are dematerialized, the question of bad delivery does not arise, i.e. they cannot be held "under objection".

(6) Elimination of Risks: The risk of theft of stocks, mutilation of certificates, loss of certificates during movements, etc. does not arise in case of dealing in Securities through Depository System.

(7) Single Point Interface: (a) Depository System eliminates the cumbersome procedure in connection with change of address or transmission of demat shares. Investors have to only inform their Depository Participant (DP) with all relevant documents and the required changes are effected in the database of all the companies, where the investor is a registered holder of securities. **(b)** There is automatic credit into the demat account of shares, arising out of bonus / split / consolidation/ merger etc. **(c)** There is ease in portfolio monitoring, since statement of account gives a consolidated position of investments in all instruments.

(b) Benefits of Commodity Trading

Benefits of Commodity Trading The world is witnessing a new trend wherein developing countries like India, China, Brazil & other emerging markets are driving the global economy with their rising domestic consumption patterns. This sustained increase in consumption has led to investment analysts realizing the growth potential of a new asset class namely Commodities. Commodities have also evolved as an asset class with the development of various commodity future indices. The performance of commodities as an asset class is usually measured by the returns on a commodity index, such as the Rogers International Commodity Index (RICI), which tracks the return in 36 different commodity products. In the last 9 years, the RICI Index has given compounded annualized returns of **18.31%** as compared to **17.22%** returns given by BSE SENSEX

(i) **Strong Performance Track Record:** The table alongside reflects positive performance of RICI Index during falling & rising market phases. In fact, the RICI INDEX has outperformed all other indices since 1999.

(ii) **Portfolio Diversification:** Adding commodities to your investment portfolio helps you take advantage of the benefit of diversification. In a diversified portfolio, assets do not move in sync with each other, as commodities exhibit low/ negative correlation with respect to equity and bonds. Low/ negative correlation means commoditiescan play an important role in portfolio diversification by reducing overall portfolio risk. This should improve the consistency of returns over time.

(iii) **Inflation Hedge:** Commodities tend to react to changing economic fundamentals in ways that are different from traditional financial assets. For example, commodities are one of the few asset classes that tend to benefit from rising inflation. As demand for goods and services increases, the price of those goods and services usually rises as well, so do the prices of the commodities that are used to produce those goods and services. Since commodity prices usually rise when inflation is accelerating, investing in commodities may provide portfolios with a hedge against inflation. As shown in the table overleaf, commodity has a positive sensitivity to inflation as compared to asset classes like stocks and bonds.

(iv) **Role of Commodities in Optimizing Portfolio Returns** An exposure to commodities in your portfolio can help you optimize its returns considerably. The graph below indicates how with a prudent mix of commodity and SENSEX stocks in a portfolio, one could enhance portfolio returns while at the same time reducing the volatility of investments.

(c) Objectives of Risk Management

The objectives behind risk management are as follows:

(a) Risk management ensures higher revenue growth

(b) Risk management ensures increased profit margin

(c) Risk management ensures increased market share.

(d) Risk management brings industry awards and recognition.

(e) Risk management helps to improve image and customer trust.

(f) Risk management ensures less default by counterparties.

(g) Risk management ensures enough liquidity to meet the uncertainties.

(h) Risk management helps to meet regulatory requirements.

(i) Risk management ensures higher efficiency.

(d) Money Market Mutual Funds:

1. **Regulatory Framework:** Instructions based on recommendations of the Task force constituted under the chairmanship of Shri D. Basu on MMMFs were as follows –

   (a) No minimum amount of investments prescribed.

   (b) Minimum lock-in-period is 46 days.

   (c) Minimum of 25 percent of funds (20 percent earlier) shall be invested in treasury bills and dated Government securities having an unexpired maturity upto one year.

   (d) Maximum of 30 percent of funds (20 percent earlier) shall be diverted to call money market.

   (e) Investment in Commercial Papers restricted to 15 percent.

   (f) Maximum of 20 percent of funds may be invested in commercial transactions and accepted/ co- accepted by banks.

   (g) Investments in Capital Market Instruments have been barred so as to avoid undue risks.

   (h) Borrowing and Lending between schemes of the Money Market Mutual Funds and between sponsoring bank and the Money Market Mutual Funds are also prohibited. Switching of assets between Schemes will have to be at market rates and based on conscious investment decisions.

2. **Regulatory impediments for the success of Money Market Funds:**

   (a) The Lock-in period hampers the liquidity of the fund. Money Market Fund should ideally operate like a savings account.

   (b) Investors expect to get more than what they would get on bank fixed deposits. Considering the administrative expenses involved, the yield on Money Market Funds should be relatively higher.

   (c) Retail investors have to be educated about Money Market Funds. A huge network is needed to target such investors.

   (d) A large corpus is needed to deal in the money market on a consistent basis.

   (e) No regulatory body has been determined.

(e) Foreign Currency Convertible Bonds (FCCB)

A foreign currency convertible Bond (FCCBs) is a quasi-debt instrument that is issued in a currency other than the issuer's domestic currency. Over the last few years, a majority of Indian Companies issuing FCCBs raised fund in several foreign currency. FCCBs could have a coupon rate of zero but have yield on maturity or FCCBs could also carry lower interest rate and yield on maturity. This is a bullet payment of interest at maturity if the bondholder opts for redemption. This

bond is a mix between the debt and equity instrument and provides the bondholders an option to convert the bonds into equity. This bond gives the issuers an ability to access capital available in foreign markets and make their presence felt in the international market. FCCB are attractive to both investors and issuers. The investors receive the safety of guaranteed payments on the bond and are also able to take advantage of price appreciation in the company's stock.

Features of FCCBs

- FCCB can be either unsecured or secured. But, in practice most of the FCCB issued in India are unsecured.
- FCCB issues have a 'Call' and 'Put' option to suit the structure of the Bond. Both the options are subject to RBI guidelines.
- Public issue of FCCB shall be through reputed lead managers and Private placement is permitted subject to certain conditions.
- It is also possible to issue zero coupon Foreign Currency Convertible Bonds and in this case, the holders of the bond are generally interested to convert the bonds into equity.
- The yield to maturity of FCCB normally ranges 2-7%.
- FCCB are generally listed to stock exchange to increase its liquidity. Credit rating of bonds is not mandatory. But, rating can help better marketing of the bonds.
- FCCB Issue related expenses shall not exceed 4% of issue size and in case of private placement, shall not exceed 2% of the issue size.