MUTUAL FUNDS CLASS 2

CLASS WORK COVERAGE

To streamline our learning process, I've categorized the questions we'll tackle in class into four distinct groups:

1. ***Classic:*** *These questions are exactly as presented in your book, providing a familiar foundation.*
2. ***Transformed:*** *Here, we've converted book questions into multiple-choice format to enhance your analytical skills.*
3. ***Adapted:*** *These are similar to book questions but with altered numbers or names, presented as multiple-choice questions for varied practice.*
4. ***Original:*** *These are entirely new questions not found in your book, designed to challenge and expand your understanding.*

This structure will help us navigate through a range of problems, ensuring a comprehensive grasp of the material. Looking forward to our next session!

Q. No	Type	Book	Page No.
17	Classic	CW Q BOOK	83
18	Classic	CW Q BOOK	83
19	Classic	CW Q BOOK	83
21	Classic	CW Q BOOK	84
22	Classic	CW Q BOOK	85

PART II: LOAD AND RETURN CALCULATION

Topic 10 LOAD

Question 17: SSEI CW Book Page No. 83

The unit price of Equity Linked Savings Scheme (ELSS) of a mutual fund is ₹ 10/-. The public offer price (POP) of the unit is ₹ 10.204 and the redemption price is ₹ 9.80.

Calculate:

i. Front-end Load
ii. Back end Load

(Source: ICAI)

ANSWER:

Public Offer Price = NAV/ (1 – Front end Load)
Public Offer Price: ₹ 10.204 and NAV: ₹ 10

Accordingly,
10.204 = 10/(1 – F)
F = 0.0199 say 2%

Redemption Price = NAV/ (1 – Back End Load)
₹ 9.80 = 10/ (1 – Back End Load)
B = 0.0204 i.e. 2.04%

Alternative

(i) Front End Load = $\frac{10.204 - 10.00}{10.00}$ = 0.0204 or 2.04%

(ii) Exit Load = $\frac{10.00 - 9.80}{10.00}$ = 0.020 or 2.00%

Topic 11 DIRECT INVESTMENT VS INVESTMENT IN MUTUAL FUND

Question 18: SSEI CW Book Page No. 83

Mr. Alex, a practicing Chartered Accountant, can earn a return of 15 percent by investing in equity shares on his own. He is considering a recently announced equity based mutual fund scheme in which initial expenses are 6 percent and annual recurring expenses are 2 percent.

i. How much should the mutual fund earn to provide Mr. Alex a return of 15 percent per annum?

ii. Mr. Alex's current Annual Professional Income is ₹ 40 Lakhs. His portfolio value is ₹ 50 Lakhs and now he is spending 10% of his time to manage his portfolio. If he spends this time on profession, his professional income will go up in same proportion. He is thinking to invest his entire portfolio into a Multicap Fund, assuming the fund's NAV will grow at 13% per annum (including dividend).

You are requested to advise Mr. Alex, whether he can invest the portfolio into Multicap Funds ? If so, what is the net financial benefit?

(Source: ICAI)

ANSWER:

i. Personal earnings of Mr. Alex = R_1 = 15%

Mutual Fund earnings = R_2

$$R_2 = \frac{1}{1 - \text{Initial expenses}(\%)} R_1 + \text{Recurring expenses}(\%)$$

$$= \frac{1}{1-0.06} \times 15\% + 2\%$$

$$= 17.96\%$$

Mutual Fund earnings = 17.96%

ii. Net financial benefit to Mr. Alex if he invests his portfolio in Fund:

Present Income of Mr. Alex

	₹ Lakhs
Annual Professional Income (A)	40.00
Portfolio Value	50.00
Income on his Portfolio @ 15% (B)	7.50
Total Income (A) + (B)	47.50

Expected Income of Mr. Alex after investing the Portfolio in Multi -cap Fund:

	₹ Lakhs
Annual Professional Income (A)	40.00
Additional Professional Income (B)	4.00
Portfolio Value	50.00
Income on his Portfolio @ 13% (C)	6.50
Total Income (A) + (B) + (C)	50.50

It is advisable to invest in Multi-cap Mutual Funds and devote the time on profession. He will get net benefit of ₹ 3 Lakhs (₹50.50 - ₹47.50)

Question 19: SSEI CW Book Page No. 83

Mr. X earns 10% on his investments in equity shares. He is considering a recently floated scheme of a Mutual Fund where the initial expenses are 6% and annual recurring expenses are expected to be 2%. How much the Mutual Fund scheme should earn to provide a return of 10% to Mr. X?

(*Source: ICAI)*

ANSWER:

$$r_2 = \frac{1}{1 - \text{initial exp}} \text{ x } r_1 + \text{recurring exp.}$$

The rate of return the mutual fund should earn

$$\frac{1}{1 - 0.06} \text{ x } 0.1 + 0.02 = 0.1264 \text{ or } 12.64\%$$

PART III: VARIOUS TYPES OF PLAN

Topic 12 TYPES OF PLAN

Question 21: SSEI HW Book Page No. 84

M/S. Corpus an AMC, on 1.04.2015 has floated two schemes viz. Dividend Plan and Bonus Plan. Mr. X, an investor has invested in both the schemes. The following details (except the issue price) are available:

Date	Dividend (%)	Bonus Ratio	NAV	
			Dividend Plan	Bonus Plan
1.04.2015			?	?
31.12.2016		1 :4 (One unit on 4 units held)	47	40
31.03.2017	12		48	42
31.03.2018	10		50	39
31.12.2018		1 :5 (One unit on 5units held)	46	43
31.03.2019	15		45	42
31.03.2020	-	-	49	44

Additional details

Investment (₹)	₹ 9,20,000	₹ 10,00,000
Average Profit (₹)	₹ 27, 748.60	
Average Yield (%)		6.40

You are required to calculate the issue price of both the schemes as on 1.04.2015.

(Source: ICAI)

ANSWER:

i. Dividend Plan

(a) Average Annual gain over a period of 5 Years	27748.60
(b) Total gain over a period of 5 years (a*5)	138743
(c) Initial Investment	920000
(d) Total value of investment (b+c)	1058743
(e) NAV as on 31.3.2020	49
(f) Number of units at the end of the period as on 31.03.2019 (d/e)	21607

	1	2	3	4 = (2*3)	5	6 = 1/ (4+5)*4	7
Period	Units held	Rate	Unit value	Dividend	NAV	New Units*	Balance Units Pre Dividend
31.03.2019	21607	0.15	10	1.5	45	697	20910
31.03.2018	20910	0.1	10	1	50	410	20500
31.03.2017	20500	0.12	10	1.2	48	500	20000

Issue Price as on 01.04.2015 Investment 920000/ Units purchased 20000 (c/i) = ₹ 46

* Let the units issued be X

X = (Closing Units/NAV + Dividend) x Dividend

ii. Bonus Plan

(a) Average Yield	0.064
(b) Investment	1000000
(c) Gain over a period of 5 years (a*b*5)	320000
(d) Market Value as on 31.03.2019 (b + c)	1320000
(e) NAV as on 31.03.2020	44
(f) Total units as on 31.03.2020 (d/e)	30000
(g) No of units as on 31.03.2018 Pre bonus = 30000*5/ (5 + 1)	25000
(h) No of units as on 31.12.2016 Pre bonus = 25000*4/ (4 + 1)	20000
(i) Issue Price as on 01.04.2015 Investment 1000000/ Units purchased 20000 (b/h)	50

Question 22: SSEI HW Book Page No. 85

A Mutual Fund Company introduces two schemes - Dividend Plan and Bonus Plan. The face value of the Unit is ₹10 on 1-4-2014. Mr. R invested ₹ 5 lakh in Dividend Plan and ₹ 10 lakh in Bonus Plan. The NAV of Dividend Plan is ₹ 46 and NAV of Bonus Plan is ₹ 42. Both the plans matured on 31-03-2019. The particulars of Dividend and Bonus declared over the period are as follows:

Date	Dividend %	Bonus Ratio	NAV of Dividend Plan(₹)	NAV of Bonus Plan (₹)
31-12-2014	12%	-	47.0	42.0
30-09-2015	-	1:4	48.0	43.0
31-03-2016	15%	-	49.5	41.5
30-09-2017	-	1 : 6	50.0	44.0
31-03-2018	10%	-	48.0	43.5
31-03-2019	-	-	49.0	44.0

You are required to calculate the effective yield per annum in respect of the above two plans.

(Source: ICAI)

ANSWER:

Dividend Plan

Unit acquired = 5,00,000/ 46 = 10869.57

Date	Units held	Dividend		Reinvestment	New	Total
		%	Amount	Rate	Units	Units
01.04.2014						10869.57
31.12.2014	10869.57	12	13043.48	47.0	277.52	11147.09
31.03.2016	11147.09	15	16720.64	49.5	337.79	11484.88
31.03.2018	11484.88	10	11484.88	48.0	239.27	11724.15
31.03.2019	Maturity Value (₹ 49.0 X 11724.15)					₹ 5,74,483.35
	Less: Cost of Acquisition					₹ 5,00,000.00
	Total Gain					₹ 74483.35

$$\therefore \text{Effective Yield} = \frac{₹\ 74,483.35}{₹\ 5,00,000} \times \frac{1}{5} \times 100 = 2.98\%$$

Bonus Plan

$$\text{Units Acquired} = \frac{10,00,000}{42} = 23809.52$$

Date	Particulars	Calculation Working	No. of Units	NAV (₹)
1.4.14	Investment		23809.52	42
30.9.15	Bonus	23,809.52 / 4 =	5952.38	
			29761.90	43
30.9.17	"	29761.9 / 6 =	4960.32	
			34722.22	44
31.3.19	Maturity Value	34722.22 x ₹ 44 =		15,27,777.68
	Less: Investment			10,00,000.00
	Gain			5,27,777.68

$$\therefore \text{Effective Yield } \frac{5,27,777.68}{10,00,000} \times \frac{1}{5} \times 100 = 10.56\%$$