

Question Paper

Portfolio Management and Mutual Funds - II (MSF2D4) : January 2008

Section D : Case Study (50 Marks)

- This section consists of questions with serial number 1 - 5.
- Answer all questions.
- Marks are indicated against each question.
- Do not spend more than 80 - 90 minutes on Section D.

Case Study^{*}

1. In New Fund Offers, offer documents say that the investment in this scheme involves performance risk and Techniques risk. Explain these risks in detail. [<Answer>](#)
(8 marks)
2. Mr. Shah suggested Mr. Agarwal to invest in Principal Junior Cap Fund, as its excess Standard Deviation Adjusted Return (eSDAR) is more than that of Principal Large Cap Fund. Observe whether the statement of Mr. Shah is justifiable or not. [<Answer>](#)
(8 marks)
3. Compute the following for Principal Junior Cap Fund and Principal Large Cap Fund. [<Answer>](#)
 - a. Information Ratio (6 marks)
 - b. Sharpe Ratio (2 marks)
 - c. Treynor Ratio (2 marks)
 - d. Return from total selectivity (2 marks)
 - e. Return from net selectivity (2 marks)
 - f. Return from inadequate diversification (2 marks)
4. Observe the small firm effect, using Banz model and interpret the results. [<Answer>](#)
(10 marks)
5. In recent years, equity style management has attracted great attention from the investment community. The popularity of style investing is evident from the number of style funds coming up. Describe the concept of style investing and also discuss different types of equity styles. [<Answer>](#)
(8 marks)

Mr. Agarwal, working in a private organization, is interested in investment in the stock market. Regularly, in news papers and Television channels, he hears that Sensex and Nifty are experiencing new highs or peaks. He wants to gain from this opportunity. And at the same time, he is afraid of parting with his money, as he feels that it is highly expensive to invest in this scenario of increasing prices. He approached Mr. Shah, a Chartered Financial Analyst, a practicing investment advisor for seeking advice in this regard. Mr. Shah suggested him to invest in Small Cap Funds. This is because, till now market has relatively overlooked small cap stocks. And, now, the momentum is shifting to smaller companies. Mr. Shah has explained Mr. Agarwal the current market scenario as follows:

With foreign institutional investors (FIIs) not showing the interest they had evinced in the pre P-note days and refraining from blind index buying, it is the smaller stocks outside the Sensex that are stealing the show. So far in November, while the Sensex has remained flat, the BSE Mid cap and BSE Small cap indices have significantly outperformed the Sensex. While the Sensex has moved down 0.13% to 19,698 from 19,724 on November 1, the BSE Mid cap has gone up by 6.85% to 8,512. The BSE Small cap has appreciated by 7.6%, crossing the 10,000-mark for the first time. Both these indices are trading at their all-time highs.

Devesh Kumar, MD, Centrum Broking, says, “This shift in momentum towards smaller stocks was expected. Valuation gap between mid caps and large caps had widened considerably and the mid caps had been languishing for months now.” Devesh feels even FIIs will start looking for value in these picks. “Index buying has taken a back seat, as of now. Informed buyers are now doing value-picks in the mid-cap space. I expect this trend to continue. You will see large caps rally, only if index buying returns,” he added.

Despite foreign investors pumping in Rs.788 crore, the Sensex dipped 145 points. Market experts believe international investors, particularly new ones, would begin looking at the smaller companies. “When they put their first 100 dollars in the Indian markets, they are clearly going to look at the larger companies — the Reliances and SBIs. The next 100 dollars will not be necessarily restricted to larger companies. They will look at many other good businesses run by good managements. Because the rally was narrow, clearly there is a valuation gap between larger and smaller companies. Obviously, money will now flow into good quality smaller companies,” says a fund manager. Besides, a number of mutual funds are launching funds targeted at this space. At least three funds have launched small-cap schemes. HSBC Mutual Fund, JP Morgan MF and DBS Chola have announced small-cap funds and more might follow suit. All this money will eventually find its way into this space, driving the prices higher.

At the end, Mr. Shah advised Mr. Agarwal to invest in Principal Junior Cap Fund to take the advantage of the current scenario. He supported his advice by stating that excess Standard Deviation Adjusted Return (eSDAR) of Principal Junior Cap Fund is more than that of Principal Large Cap Fund. He measures eSDAR as follows:

$$eSDAR = R_F + (R_P - R_F) \times (\sigma_M / \sigma_P) - R_M$$

The details of Principal Junior Cap Fund and Principal Large Cap Fund are as follows:

Name of Scheme	Principal Junior Cap Fund
Type of Scheme	An Open Ended Equity Scheme
Investment Objective	To provide capital appreciation and/or income in the form of dividend by investing predominantly (atleast 65% of the net assets)in the equity and equity related instruments of the companies within the market capitalization of the companies comprising CNX Nifty Junior Index.
Asset Allocation	Equity and equity related instruments of the companies within the market capitalization range of the companies comprising CNX Nifty Junior Index: 65% - 100% and Money Market instruments: 0% - 35%
Load Structure	Entry Load: Upto Rs.3 crore – 2.25% Rs.3 crore and above –Nil Exit Load: Nil
Minimum Investment Amount	Rs.5,000

Name of Scheme	Principal Large Cap Fund
Type of Scheme	An Open Ended Equity Scheme
Investment Objective	To provide capital appreciation and /or dividend distribution by predominantly investing in companies having a large market capitalization.
Asset Allocation	Equity and equity related instruments of the companies with large capitalization: 65% - 100% and Money Market instruments: 0% - 35%
Load Structure	Entry Load: Upto Rs 3 crores: 2.25% Rs 3 crores and above - Nil Exit Load: 0.50% if redeemed on or before 180 days from the date of investment
Minimum Investment Amount	Rs.5,000

APPENDIX

Date	NAV of Principal Junior Cap Fund (Rs.)	NAV of Principal Large Cap Fund (Rs.)	Nifty	91 Day T-Bill (Rs.)
31-10-2006	13.68	16.17	3744.10	—
30-11-2006	14.13	17.08	3954.50	98.36

29-12-2006	14.42	17.06	3966.40	98.24
31-01-2007	14.94	17.46	4082.70	98.15
28-02-2007	13.94	16.10	3745.30	98.17
30-03-2007	14.04	16.25	3821.55	98.05
30-04-2007	15.02	17.59	4087.90	98.20
31-05-2007	15.92	17.19	4295.80	98.13
29-06-2007	16.53	17.75	4318.30	98.19
31-07-2007	16.79	18.80	4528.85	98.90
31-08-2007	16.29	18.46	4464.00	98.26
28-09-2007	18.05	20.57	5021.35	98.24
31-10-2007	20.69	24.18	5900.65	98.28

END OF SECTION D

Section E : Caselets (50 Marks)

This section consists of questions with serial number 6 - 11.

Answer all questions.

Marks are indicated against each question.

Do not spend more than 80 - 90 minutes on Section E.

Caselet 1

Read the caselet carefully and answer the following questions:

6. As mentioned in the caselet, venture capital funds have the ability to invest in unlisted and longer tenure projects, but have high minimum contribution requirements, thus leaving out the retail investors. Analyze why it is difficult to make retail investors participate in infrastructure development through Venture Capital Funds (VCFs).

[<Answer>](#)

(8 marks)

7. As mentioned in the caselet, the proposed Dedicated Infrastructure Funds (DIFs) will largely invest in unlisted infrastructure projects and/or companies. The level of expertise, resources and commitment required to manage these investments will be significantly higher than as well as different from that used for existing Mutual Funds. Analyse the factors which will increase the cost of managing and operating proposed DIFs compared to current Mutual Funds.

(8 marks)

The basic infrastructure a country develops is the backbone for its long-term economic growth and employment generation. It is not possible to achieve inclusive and sustainable growth without the creation of enabling infrastructure in an economy. To sustain its current economic growth trajectory, India will need to develop and augment infrastructure in all the key sectors like Power, Roads, Urban-Infrastructure, Rail, Ports, Airports etc. A sustainable and long-term shift to 9-10% GDP growth rate is only possible, if the country is able to channelize large investments in infrastructure creation.

Various government bodies & Committees, international agencies and research houses point to the investment requirement for the infrastructure sector, during the next five years, to be in the range of US\$280bn-US\$475bn. Considering the magnitude of investments required during the next five years, it is imperative to tap all available sources of the capital and a significant role needs to be played by the private sector. In the 2007 Budget speech for the Financial Year 2007-08, the Hon'ble Finance Minister mentioned the need to promote the flow of investment to the Infrastructure sector by permitting domestic mutual funds to launch and operate Dedicated Infrastructure Funds (DIFs). With a view to suggesting a detailed action/plan for 'operationalising' this, the Securities & Exchange Board of India (SEBI) had set up the Committee to suggest the broad guidelines for launch and operations of DIFs. India is a country of savers. The household savings rate to GDP hovers around the 30% mark. Household savings have traditionally been channelised into Bank Deposits, Small Savings Schemes of the Government, Insurance etc. With the advent of mutual funds, it has been observed that these have increasingly become a significant channel for focused investment into the listed equity and debt markets. Similarly, DIFs, can potentially become an important source of capital for various infrastructure projects that are important for the country's economic development. Such funds can act as channeling agents of capital from Indian retail investors, pension funds, insurance companies as well as overseas institutional investors. DIFs, if they are successful in attracting large retail-investor participation, can also reduce dependence upon foreign capital for investments in infrastructure assets. From an investor perspective, DIFs can also provide an alternative investment opportunity to retail investors and ensure broader public participation in the infrastructure creation in the country.

The proposed DIF's will need to be structured differently from the current Mutual Fund Schemes, as these will largely invest in unlisted companies, with longer gestation periods. Venture Capital Funds have the ability to invest in such unlisted and longer tenure projects, but have high minimum contribution requirements, thus leaving out the retail investors. They can not get listed on the stock exchanges till the expiry of three years from the date of issue and can not reach public domain through advertisements. DIFs can be structured to fill this gap and can be uniquely positioned to benefit both the ongoing infrastructure initiatives as well as the potential retail investors. The

Committee believes that DIFs should operate as close-ended schemes with a maturity period of seven years and a possibility of one or two extensions, subject to adequate disclosures in the offer documents and approval of trustees. The proposed DIF's should get listed within 24 months of the launch of the scheme and be allowed to buy-back the units, from the market within certain limits to safeguard the interests of investors. In terms of Investments, it is suggested that the DIF's may be allowed to invest up to 100% of its funds into unlisted securities including both equity and debt instruments. Exposure to listed companies, however, should be limited to 10% of the NAV at the time of making the investments. Further, the DIF's may be allowed to take control of the asset, if they so desire, and own up to 100% of the paid up capital of a company. In light of the unique nature of DIFs like dedicated teams for the management of such schemes, requirement of in-depth research because of companies being unlisted and information not being available, higher level of monitoring of investments, the fee structure of such funds will have to be different from the existing Mutual Fund schemes, in line with global practices. The Committee therefore suggests that maximum overall permissible expense ratio for DIFs including investment management fees be additional 1% over and above that specified in the Mutual Fund Regulations. Additionally, the DIFs should also be allowed to charge a performance fee after providing a certain minimum return to the unit holders, as per global practice. As the proposed Dedicated Infrastructure Funds will largely invest in unlisted infrastructure projects and/or companies, the level of expertise, resources and commitment required to manage these investments will be significantly higher than as well as different from that used for existing Mutual Funds.

END OF CASELET 1

Caselet 2

Read the caselet carefully and answer the following questions:

8. As mentioned in the caselet, wealth management firms are moving towards more dynamic and need based client service approaches, applying advanced segmentation and analysis to the traditional assets under management. In this context, explain the steps that can be taken by wealth management firms to successfully implement the dynamic and need based client services.
9. According to the caselet, wealth management firms need to address several businesses critical issues that are hampering them from providing better service and growing assets under management. Analyze the challenges to be faced by the wealth managers in wealth management industry.

[<Answer>](#)

(9 marks)

[<Answer>](#)

(9 marks)

With the economic boom catapulting stock and real estate prices to an all-time high and salaries hitting the roof, the wealth and disposable incomes of several million Indians have grown substantially during the past two decades. As a consequence, India has a stronger demand for wealth management services which have emerged as a well rewarding option for the Indian bankers. The massive growth of financial markets, the complexities involved in the emerging markets and the degree of specialization required in the area of wealth management are a few of the specific reasons for the growth of wealth management services in India.

Wealth management/Investment Management Service (IMS) is an important revenue stream for banks and financial institutions that have rapidly grown over the past few years. Banks are now setting up special cells to monitor and study investment opportunities globally and to examine products offered by IMS. Banks are using this information base to advice clients of the investment opportunities available and deploy clients' funds into a variety of investment avenues. Due to its highly-specialized nature and potential for higher earnings, banks have identified wealth management as a business opportunity. A robust economy, spiraling stock markets and an increase in spending power have turned the spotlight on this sector.

Wealth management is a term that originated in the US during 1990s. It can be regarded as a sophisticated form of private banking that provides various types of investment, banking and insurance services. Wealth management can also be classified into advanced form of financial planning providing individuals and families with services such as private banking, estate planning, asset management, taxation advice and portfolio management.

Accordingly, wealth management encompasses asset management, client advisory services and the distribution of investment products.

Management of wealth is a vibrant process. Nowadays, private assets are generally complex in structure. Individual investors are the guiding and motivating factors for development of specific investment vehicles. Wealth gives rise to uncommon challenges as well all unique opportunities. It needs experience, expertise and capabilities that enable the customer to understand the challenges and gain from these opportunities. Wealth management is not just providing investment advice. An individual can get all his financial planning done by these service providers. Banks, professional trust companies and brokerage firms provide wealth management services. As wealth management serves the affluent community, many government-licensed lawyers, Certified Public Accountants (CPAs), Chartered and Certified Wealth Managers and Certified Financial Planners are involved in this type of high-net-worth consulting/ wealth management services.

India has now become a major economic power and had a healthy GDP growth rate of 8.9% as on June 2007. According to the 2005 World Wealth Report published by Merrill Lynch and Cap Gemini, there are 70,000 HNW individuals in India and their number is growing every year due to the country's robust economic growth. It has been reported by another independent market analyst, Data monitor that the Indian wealth market has grown at the rate of 17.6% during the last five years. Currently, India is growing at the rate of 8.5% and is the fastest-growing economy among the BRIC

nations after China. Today, India is attracting both foreign and Indian wealth managers to start their operations. However, the Indian wealth market is not developed fully in comparison to those of the developed nations. According to the estimates by Data monitor, affluent Indians will have a total amount of \$201bn by 2008. India is an increasingly attractive magnet for wealth management, as the country's economy has been forecast to be among the world's four largest, within two decades.

The wealth management industry is one of most dynamic industries today. Due to the internet, investors have more access than ever to investment information and choices. As a result, individual investors, especially a high net worth investors are increasingly acting like institutional investors and have come to expect sophisticated service such as portfolio risk management, dynamic asset allocation, and objective investment advice. In response, wealth managers need to provide more advanced and holistic service to grow their practices. But, first wealth management firms need to address several businesses critical issues that are hampering them from providing better service and growing assets under management.

To address these challenges, wealth management firms are moving towards more dynamic and need based client service approaches, applying advanced segmentation and analysis to the traditional assets under management that was once embraced as an industry standard.

END OF CASELET 2

Caselet 3

Read the caselet carefully and answer the following questions:

10. Explain the advantages and disadvantages of ELSSs over traditional tax saving instruments like PPF and NSC etc.,
11. As per the caselet, the lock-in period of three years in case of ELSSs provides for unlocking the value and outperforming the comparable equity diversified schemes. Analyze how the lock-in period provides for unlocking the value.

[<Answer>](#)

(8 marks)

[<Answer>](#)

(8 marks)

For those who have made investments in Public Provident Fund (PPF), National Savings Certificate (NSC) and all other famous investment streams and are on the look out for something new to lock in the funds for saving tax and for high return on investments, here is an option to have a look at. To claim the exemption, the investment will have to be locked in for a period of 3 years. The unit holder is free to sell his holdings once this lock in expires at a price based on the Net Asset Value (NAV). While in the case of an open-ended scheme the units can be sold anytime after the lock in period, in the case of a closed end scheme, the units can be redeemed only after the specified due date. However on such sale, the capital gains will be chargeable to tax. The common retort to the often asked question by anxious investors, of the best way to save tax, is to invest in Post Office savings schemes, or perhaps a regular investment in a public provident fund, or to buy insurance policies. It is unfortunate that the greatly advantageous Equity Linked Savings Schemes (ELSSs) is hardly ever mentioned, which is not a surprise, since, even though it is one of the high yielding products, it remains one of the lesser-known ones. That is another reason that investors do not yet comprehend the potential benefits of this product.

ELSS holds the advantage of being the only equity-based tax saving instrument available in the country today and offers tax deduction on investments up to Rs 1,00,000, under Section 80C of the Income-Tax Act. Experts are of the opinion that equities, proven time and again to be the best asset class in the long term, would continue to beat inflation over the next few years, considering the strong growth rate in the economy and a healthy rise in corporate earnings. It would be prudent for long-term investors to invest in an asset that will do just that. The performance of the units can be monitored with the help of the published reports from the mutual funds. The investments made in the open ended funds can be withdrawn anytime, after the lock in period, based on the performance of the units.

ELSSs are similar to non equity diversified schemes that invest across the board and market segments. Features that differentiate ELSS from an open-ended equity diversified scheme are tax saving benefit (deductions under Sec 80C) and a lock-in period of three years. The lock-in period of three years provides for unlocking the value and outperforming the comparable equity diversified schemes. Also, one can invest in these schemes in small amounts through a Systematic Investment Plan and begin with a small fund size to add to this expense (i.e. entry/exit load) of investing in an ELSS is similar to any other equity scheme.

However, the ELSS has some factors of caution that an investor has to eye upon before locking the funds with. The return on the investment is not an assured one. This is because these funds invest in the equity markets, which can get erratic many a time. Hence, the conditions of the equity market as well as the past performance of the fund will have to be analysed before making the investments in this scheme.

ELSS is the right investment option for all those who wish for high returns in terms of dividend as well as capital appreciation and at the same time is ready to shoulder high risks, as return and risk go hand in hand. Until FY05, Sec 88 of the Income Tax Act had fixed an overall ceiling of Rs 1,00,000

for investments in the tax saving instruments, including a cap of Rs 10,000 for investment in ELSS. The investors would get a rebate based on his taxable income. However, Budget 2005-06 has scrapped Sec 88 and replaced it with Sec 80C. Under this section, investments upto Rs 1,00,000 are eligible for deduction from Gross Taxable Income and the ceiling on investments in ELSS is removed. This investment is deducted from the Gross Total Income, hence reducing the taxable income.

END OF CASELET 3

END OF SECTION E

END OF QUESTION PAPER

Suggested Answers

Portfolio Management and Mutual Funds - II (MSF2D4) : January 2008

Section D : Case Study

1. **Performance Risk:** The value of (and income from) an investment in the Scheme can decrease as well as increase, depending on a variety of factors which may affect the values and income generated by a Scheme's portfolio of securities. The returns of a Scheme's investments are based on the current yields of the securities, which may be affected generally by factors affecting capital markets such as price and volume, volatility in the stock markets, interest rates, currency exchange rates, changes in government and Reserve Bank of India policy, taxation, political, economic or other developments and closure of the stock exchanges.

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Techniques Risk: The scheme may use techniques (including derivatives, futures and options, warrants, etc) and instruments that may be permitted and/or that may become permissible under SEBI/RBI Regulations and/or Regulations and/or statutory modification or re-enactment thereof for efficient portfolio management and to attempt to hedge or reduce the risk of such fluctuation. However, these techniques and instruments, if imperfectly used have the risk of the scheme incurring losses due to mismatches particularly in a volatile market. The Fund's ability to use these techniques may be limited by market conditions, regulatory limits and tax considerations (if any). The use of these techniques is dependent on the ability to predict movements in the prices of securities being hedged and movements in interest rates. There exists an imperfect correlation between the hedging instruments and the securities or market sectors being hedged. Besides, the fact that skills needed to use these instruments are different from those needed to select the Fund's/

Scheme's securities. There is a possible absence of a liquid market for any particular instrument at any particular time even though the futures and options may be bought and sold on an organized exchange. The use of these techniques involves possible impediments to effective portfolio management or the ability to meet repurchase/redemption requests or other short-term obligations because of the percentage of the Scheme's assets segregated to cover its obligations.

2.

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Month	R_{JCP} (%)	R_{LCP} (%)	R_{Nifty} (%)	R_{Tbill} (%)	$(R_{JCP} - R_{Tbill})$ (%)	$(R_{JCP} - R_{Tbill})^2$	$(R_{JCP} - R_{Tbill})$ (%)	$(R_{JCP} - R_{Tbill})^2$	$(R_{LCP} - R_{Tbill})$ (%)	$(R_{LCP} - R_{Tbill})^2$
Nov 06	3.29	5.63	5.62	0.56	-0.36	0.13	2.02	4.08	1.56	2.43
Dec 06	2.05	-0.12	0.30	0.60	-1.60	2.56	-3.73	13.91	-3.76	14.14
Jan 07	3.61	2.34	2.93	0.63	-0.04	0.0016	-1.27	1.61	-1.13	1.28
Feb 07	-6.69	-7.79	-8.26	0.62	-10.34	106.92	-11.40	129.96	-12.32	151.78
Mar 07	0.72	0.93	2.04	0.66	-2.93	8.59	-2.68	7.18	-2.02	4.08
Apr 07	6.98	8.25	6.97	0.61	3.33	11.09	4.64	21.53	2.91	8.47
May 07	5.99	-2.27	5.09	0.64	2.34	5.48	-5.88	34.57	1.03	1.06
Jun 07	3.83	3.26	0.52	0.62	0.18	0.03	-0.35	0.12	-3.54	12.53

Jul 07	1.57	5.92	4.88	0.37	-2.08	4.33	2.31	5.34	0.82	0.67
Aug 07	-2.98	-1.81	-1.43	0.59	-6.63	43.96	-5.42	29.38	-5.49	30.14
Sep 07	10.80	11.43	12.49	0.60	7.15	51.12	7.82	61.15	8.43	71.07
Oct 07	14.63	17.55	17.51	0.58	10.98	120.56	13.94	194.32	13.45	180.90
Total	43.80	43.32	48.66	7.08		354.77		503.15		478.55
Average	3.65	3.61	4.06	0.59						

Variance of returns of Junior Cap Fund = $(354.77/11) = 32.25(\%)^2$

Variance of returns of Large Cap Fund = $(503.15/11) = 45.74(\%)^2$

Standard deviation of returns of Junior Cap Fund = $(32.25)^{1/2} = 5.68\%$

Standard deviation of returns of Large Cap Fund = $(45.74)^{1/2} = 6.76\%$

Variance of returns of Nifty = $(478.55/11) = 43.50(\%)^2$

Standard deviation of returns of Nifty = $(43.50)^{1/2} = 6.6\%$

Return on T-Bill = $(100 - \text{Current Price}) / \text{Current Price} \times 365/91 \times 100 \times 1/12$

$$eSDAR_{JCP} = R_{Tbill} + (R_{JCP} - R_{Tbill}) \times \sigma_{Nifty} / \sigma_{JCP} - R_{Nifty}$$

$$= 0.59 + (3.65 - 0.59) \times 6.6/5.68 - 4.06 = 0.0856\%$$

$$eSDAR_{LCP} = R_{Tbill} + (R_{LCP} - R_{Tbill}) \times \sigma_{Nifty} / \sigma_{LCP} - R_{Nifty}$$

$$= 0.59 + (3.61 - 0.59) \times 6.6/6.76 - 4.06 = -0.5215\%$$

As quoted by Mr. Agarwal, eSDAR of Junior Cap Fund is more than that of Large Cap Fund. However, investment based on only this measure of evaluation is not advisable. We have to look at other measures of performance and the various types of risks associated with the scheme.

3. a.

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Month	R _{JCP} (%)	R _{LCP} (%)	R _{Nifty} (%)	R _{Tbill} (%)	$(R_{JCP} - R_{Tbill})$	$(R_{LCP} - R_{Tbill})$
Nov 06	3.29	5.63	5.62	0.56	-0.56	3.15
Dec 06	2.05	-0.12	0.30	0.60	6.02	14.02
Jan 07	3.61	2.34	2.93	0.63	0.05	1.44
Feb 07	-6.69	-7.79	-8.26	0.62	127.39	140.45
Mar 07	0.72	0.93	2.04	0.66	5.92	5.41
Apr 07	6.98	8.25	6.97	0.61	9.69	13.50
May 07	5.99	-2.27	5.09	0.64	2.41	-6.06
Jun 07	3.83	3.26	0.52	0.62	-0.64	1.24
Jul 07	1.57	5.92	4.88	0.37	-1.71	1.89
Aug 07	-2.98	-1.81	-1.43	0.59	36.40	29.76
Sep 07	10.80	11.43	12.49	0.60	60.27	65.92
Oct 07	14.63	17.55	17.51	0.58	147.68	187.49
Total	43.80	43.32	48.66	7.08	392.92	458.21

Average	3.65	3.61	4.06	0.59		
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Covariance between the returns of JCP and Nifty = $392.92/11 = 35.72(\%)^2$

Covariance between the returns of LCP and Nifty = $458.21/11 = 41.66(\%)^2$

Variance of Nifty returns = $478.55/11 = 43.5(\%)^2$

Beta of Junior Cap Fund = $35.72/43.5 = 0.82$

Beta of Large Cap Fund = $41.66/43.5 = 0.96$

Residual Risk of Junior Cap Fund = $(32.25 - 0.82^2 \times 43.5) = 3.0006(\%)^2 \sim 1.73(\%)$

Residual Return of Junior Cap Fund = $3.65 - 0.59 + 0.82 \times (4.06 - 0.59) = 0.2146(\%)$

Residual Risk of Large Cap Fund = $(45.74 - 0.96^2 \times 43.5) = 5.65(\%)^2 \sim 2.38(\%)$

Residual Return of Large Cap Fund = $3.61 - 0.59 + 0.96 \times (4.06 - 0.59) = -0.3112(\%)$

Information Ratio of Junior Cap Fund = $0.2146/1.73 = 0.124$

Information Ratio of Large Cap Fund = $-0.3112/2.38 = -0.1308$

b. Sharpe Ratio = $(R_P - R_F)/\sigma_P$

Principal Junior Cap Fund = $(3.65 - 0.59)/5.68 = 0.5387$

Principal Senior Cap Fund = $(3.61 - 0.59)/6.76 = 0.4467$

c. Treynor Ratio = $(R_P - R_F)/\beta_P$

Principal Junior Cap Fund = $(3.65 - 0.59)/0.82 = 3.7317$

Principal Senior Cap Fund = $(3.61 - 0.59)/0.96 = 3.1458$

d. Return from total selectivity = $R_P - R_F + \beta_P(R_{M-} - R_F)$

Principal Junior Cap Fund = $3.65 - 0.59 + 0.82 \times (4.06 - 0.59) = 0.2146\%$

Principal Senior Cap Fund = $3.61 - 0.59 + 0.96 \times (4.06 - 0.59) = -0.3112\%$

e. Return from net selectivity = $R_P - R_F + (R_{M-} - R_F) \sigma_P/\sigma_M$

Principal Junior Cap Fund = $3.65 - 0.59 + (4.06 - 0.59) \times 5.68/6.6 = 0.0737\%$

Principal Senior Cap Fund = $3.61 - 0.59 + (4.06 - 0.59) \times 6.76/6.6 = -0.5341\%$

f. Return due to inadequate diversification = Return from total selectivity – Return from net selectivity

Principal Junior Cap Fund = $0.2146\% - 0.0737\% = 0.1409\%$

Principal Senior Cap Fund = $-0.3112\% - (-0.5341\%) = 0.2229\%$

4.

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Month	R _{JCP} (%)	R _{LCP} (%)	R _{Nifty} (%)	R _{Tbill} (%)	(R _{Nifty} –R _{Tbill}) (%)	(R _{JCP} – R _{LCP}) (%)	(R _{Nifty} –R _{Tbill}) ² (%)	(R _{Nifty} –R _{Tbill})× (R _{JCP} – R _{LCP})(%)
					X	Y	X ²	XY
Nov 06	3.29	5.63	5.62	0.56	5.06	-2.34	25.60	-11.84
Dec 06	2.05	-0.12	0.30	0.60	-0.30	2.17	0.09	-0.65
Jan 07	3.61	2.34	2.93	0.63	2.30	1.27	5.29	2.92
Feb 07	-6.69	-7.79	-8.26	0.62	-8.88	1.10	78.85	-9.77
Mar 07	0.72	0.93	2.04	0.66	1.38	-0.21	1.90	-0.29
Apr 07	6.98	8.25	6.97	0.61	6.36	-1.27	40.45	-8.08
May 07	5.99	-2.27	5.09	0.64	4.45	8.26	19.80	36.76
Jun 07	3.83	3.26	0.52	0.62	-0.10	0.57	0.01	-0.06
Jul 07	1.57	5.92	4.88	0.37	4.51	-4.35	20.34	-19.62
Aug 07	-2.98	-1.81	-1.43	0.59	-2.02	-1.17	4.08	2.36

Sep 07	10.80	11.43	12.49	0.60	11.89	-0.63	141.37	-7.49
Oct 07	14.63	17.55	17.51	0.58	16.93	-2.92	286.63	-49.44
Total					41.58	0.48	624.41	-65.20
Average					3.465	0.04		

Month	$\alpha = Y - \beta X$	$(X - \bar{X})$	$(X - \bar{X})^2$
Nov 06	-1.63	-2.16	4.67
Dec 06	2.13	1.60	2.56
Jan 07	1.59	1.06	1.12
Feb 07	-0.14	-0.67	0.45
Mar 07	-0.02	-0.55	0.30
Apr 07	-0.38	-0.91	0.83
May 07	8.88	8.35	69.72
Jun 07	0.56	0.03	0.0009
Jul 07	-3.72	-4.25	18.06
Aug 07	-1.45	-1.98	3.92
Sep 07	1.04	-0.51	0.26
Oct 07	-0.55	-1.08	1.17
Total	6.31		103.0609
Average	0.53		

Standard Deviation of $\alpha = (103.0609/11)^{1/2} = 3.06\%$

$$(R_{JCP} - R_{LCP}) = \alpha + \beta (R_M - R_T)$$

$$\beta = \frac{\sum (X - \bar{X})(Y - \bar{Y})}{\sum (X - \bar{X})^2} = \frac{12 \times 624.41}{12 \times 624.41} = -0.14$$

$$\alpha = (R_{SCP} - R_{LCP}) - \beta (R_M - R_T)$$

$$\alpha = Y - \beta X$$

$$= 0.04 - (-0.14) \times 3.465$$

$$= 0.5251 \%$$

$$t\text{-Test} = 0.5251/3.06 = 0.1716$$

Since t value is not significantly high, the existence of small firm effect cannot be concluded.

5. In 1970, James Farrell identified that there is significant correlation between the returns of some stocks, which he grouped together. Further, he found that the correlation between the returns of different stocks was low. He called the groups of stocks whose returns had strong correlation with each other 'clusters'. He identified four distinct clusters – growth stocks, cyclical stocks, stable stocks, and energy stocks. In the later part of the 1970s, further studies have shown that even groupings by size result in distinct classes of stocks whose returns are correlated. Portfolio managers view each of these groups or clusters or classes as different 'styles' of investing. Some portfolio managers then started calling themselves "growth stock managers" or "cyclical stock managers". Some of them became "large cap" investors while others were "small cap". Switching styles has come to be known as a way of enhancing portfolio performance. Style investing is widely accepted today. This is evidenced by the fact that there are so many style funds coming up – funds that invest in infotech, FMCG stocks, Sensex stocks, etc.

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Types of Equity Styles

Equity styles can be classified in many ways. The simplest of the classifications is based on value or growth. For a manager who focuses on growth, the concern is about the growth of the earnings. Taking the most popular ratio used in the determination of whether the stocks are underpriced or overpriced, the price to book ratio, we can understand that the logic in growth investing is pretty simple. If the value of the share is expressed as a multiple of the earnings (the price to book ratio), for the same ratio, the price increases with increase in the earnings. The 'growth manager' seeks stocks that appear to be having good potential for earnings growth. He suffers if the earnings fall or the price to book ratio of the company declines. The 'value manager', in contrast, invests in stocks that have a relatively low value of the price to book ratio. His expectation would be that the price to book ratio of the stocks would some day increase and thus their prices would increase. If the price to book ratio of the stocks does not increase or declines further, he loses. A variation that can be incorporated into the classification of value and growth is the size of the firm.

Including size, the following four classifications are possible:

- Large value stocks
- Large growth stocks
- Small value stocks
- Small growth stocks.

There could be other types of classifications within growth and value investing. In value style, there are three categories. They are the low P/E ratio style, contrarian style, and yield style. The low P/E manager concentrates on stocks trading at a low P/E ratio. The P/E ratio used may change from one manager to another – some may use the ratio based on the current earnings, others may use a normalized ratio while still others may use a ratio based on discounted future earnings. Contrarian managers invest in stocks that are selling at low values compared to their book values. The companies that generally fall in this category are those that have low current earnings and even no earnings at all and cyclical stock that are in a downtrend. Contrarian managers try to find value where others do not hope to gain from the price appreciation of stocks. Yield managers are those that look for companies with above average dividend yields. It must be said that they are the most conservative among the three. In growth style too there are two variations. Managers who follow consistent growth style invest

in companies that grow consistently and at a good rate. Then there are those that follow earnings momentum growth style, looking for high volatility in earnings and an above average rate on the whole. The latter buy stocks in expectation of an acceleration of earnings. There are also some managers who adopt a style that fits somewhere in between value and growth. These managers generally have some bias or 'tilt' in favor of either value or growth, but the bias is generally not sufficient to classify the managers into value or growth. These managers generally look for companies that are expected to turn in above average earnings, but are selling at a reasonable price. They are generally referred to as growth at a price managers or growth at a reasonable price managers because they provide good returns without excessive risk.

Section E: Caselets

6. The various factors which keep the retail investors away from participating in venture capital funds are:

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Liquidity: No venture capital fund can get its units listed on a recognized stock exchange until the expiry of three years from the date of the issuance of units by the venture capital fund.

Promotion and Reach: No Venture Capital Fund can advertise in any public domain for the subscription or purchase of any of its units.

Investment Size: Minimum investment size for an investor is very high. Therefore retail investors are not in a position to invest through this route.

Therefore it would not be possible under the existing regulatory (SEBI VCF Regulations) to allow wider retail investor participation in the Infrastructure Sector by directly owning infrastructure assets through the venture capital route. Retail investments would require a lower minimum investment size as well as an ability to reach out to investors through public channels.

7. Some of the factors, which will increase the cost of managing and operating proposed DIFs compared to current Mutual Funds are:

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Higher Investment Costs- Listed instruments are fairly liquid and provide managers an option of easy entry and exit. However, in the unlisted space, the process of both entry and exit can be quite lengthy and complex. For every single investment a DIF makes, it will have to evaluate multiple investment. The costs associated with the evaluation of the projects, in which the DIFs do invest, will therefore be significantly higher compared to other mutual funds. These will include expenses related to legal fees, due-diligence costs, travel costs, advisory fees etc, apart from higher managerial time and effort spent on each investment idea.

Expenses related to periodic valuations- The NAV calculation for current Mutual Fund schemes is based upon the market prices of the securities. However for investments in Unlisted space, DIF's will have to engage external parties to periodically value the investments, thereby increasing the costs. Listed securities are well researched by in-house research teams as well as several sell-side brokers, making the cost of researching companies lower. Most of the companies have a fairly long history and a lot of information is publicly available. However, in the unlisted space, information flow is restricted and there is practically no third-party research available. DIF's will need to do all the basic research to be able to meaningfully evaluate investment proposals.

Investment monitoring Costs- The DIFs will have to continuously monitor the performance of investee projects. The level of involvement of a DIF, with each investment, will be extremely deep. As per prevailing international

practices, DIFs may need to invest time to provide inputs to strategic decision making, board level decisions (probably with a seat on the board of the investee companies) and even day-to-day functioning of the investee companies. All this will result in higher commitment and efforts on the part of senior team members of the Mutual Funds.

Requirement of a dedicated Team: Unlike existing Mutual Funds where the same team may manage multiple schemes, the proposed DIF's will need to be managed by dedicated teams. As per international best practices, a fully dedicated team manages such funds. Both the investment evaluation and monitoring processes will be time-consuming. Additionally, the team managing the funds shall ideally stay with the investments through the full cycle (7-9 years) and internationally is thus compensated for their longer commitment.

8. The steps that can be undertaken by the wealth management firms to successfully implement a dynamic needs-based approach to client service are

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Segmenting and Determining Client Needs in Addition to AUM: Initially clients can be segmented according to their interests, frequency of firm interaction, communication preferences and financial behavioral attributes. In this stage, there is a need to develop a clear understanding of the client's time-bound goals, risk tolerance, family situation and income needs.

Product and Service Selection Based on Firm Strategy and Client Lifetime Value: Firm is to analyze client needs and create tailored offerings to meet the unique needs of clients. For gaps between client needs and product and service offerings, the firm must decide to build additional capabilities, partner with a third party, or decline certain business opportunities to ensure consistency with the firm's overall strategy. There is a need to provide each client with extraordinary service of utmost integrity and professionalism.

Selecting a Service Approach: Firms need to determine a service approach to fit the needs of clients and deliver service through multiple channels.

Staying Current with Client Needs: Firms should continuously monitor and update their clients' profiles and behavior patterns to effectively address and anticipate ever-changing client needs.

9. The challenges to be faced by the wealth managers in wealth management industry are

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Increasing client demands: In today's world, clients are expecting a greater personalization and tax benefits. Firms should focus on not just selling their products but provide advice and highly personalized portfolio management services across multiple life cycle steps.

Inability to aggregate product and other data: As wealth management becomes increasingly complex, firms need to aggregate all data related to the wealth management practice across the firm including all product and client data.

Poor technology implementation and adoption: Installing a product built on some technology, to address specific domain requirements is one aspect, however, a holistic wealth management solution means not just technology but also the methodology and process followed to apply or implement that technology for the benefit of end client.

Competing for and closing new clients, retaining existing clients: The number of available investors, especially high net worth individuals is increasing rapidly every year. If a wealth management firm is not

growing, their client base at the same level as the market is growing, they could be losing market share.

Increasing compliance and regulatory requirements: As compliance and regulatory requirements increase, firms need to protect themselves with proven compliance processes and automated tools. In recent years, there has been a marked increase in regulations and compliance audits, especially of the US banking industry.

10. Advantages of ELSSs

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1. Main advantage of ELSS is its short lock-in period. Maturity period of NSC is 6 years and PPF is 15 years.
2. Since it is an equity linked scheme earning potential is very high.
3. Investor can opt for dividend option and get some gains during the lock-in period
4. Investor can opt for Systematic Investment Plan
5. Some ELSS schemes also offer personal accident death cover insurance
6. Provides 30 to 40% returns compared to 8% in NSC and PPF

Disadvantages of ELSS

1. Risk factor is high compared to NSC and PPF
2. Premature withdrawal is not allowed but it is allowed in other instruments in some specific conditions.

11. The close-ended nature of the Scheme gives the investment team an opportunity to take decisions without the pressures of dealing with constant fund cash flow considerations. This would also help to focus on long-term opportunities in mid-cap and small-cap companies that are strategically placed to take advantage of the robust economic growth in India and of the global outsourcing trend. This is because; smaller companies have a greater amount of growth opportunities than larger companies. Small cap companies also tend to have a more volatile business environment, and the correction of problems - such as the correction of a funding deficiency - can lead to a large price appreciation. Finally, small cap stocks tend to have lower stock prices, and these lower prices mean that price appreciations tend to be larger than those found among large cap stocks. Since the funds would remain with the fund manager for a long duration, it would give him more flexibility with regards to the illiquid nature of mid cap space. Therefore, the Fund is likely to perform better than an open-ended scheme.

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* The above case is prepared only for the purpose of examination and not to illustrate either effective or ineffective performance of the fund. The case contains real information adapted and combined with other information to generate discussion or analysis on the desired topics.