

Question Paper

Security Analysis - II (MSF2D2): October 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. a. Perform structural analysis of Indian Telecommunication Industry. [<Answer>](#)
(6 marks)

b. Perform four factor ROE analysis and comment on the same. (5 marks) [<Answer>](#)
2. From the data provided in Annexure-I, you are **required** to [<Answer>](#)

a. Estimate the probability that the monthly return from the stock of Metcash Telecommunications Ltd. (MTL) would be between 1% and 3% during July 2008. (5 marks)

b. Advise, Mr. Ramesh Tolani, a retail investor in the market towards his investment in the stock of MTL, who wants the proportion of unsystematic risk in his investment should not exceed 45%. (5 marks)
3. The management of Metcash Telecommunications Ltd. wants to compute the value of equity through two different methods, for its decision making in future growth of the company. For the purpose of valuation the equity beta of MTL is to be taken as 1.14. The risk-free rate currently prevailing in the economy is 7.5%. It is observed that the market is able to provide a risk premium of 9.5%. You are **required** to compute the value of equity of Metcash Telecommunications Ltd. (MTL) as on March 31st 2008, using: [<Answer>](#)

a. Free Cash Flow to Equity Approach. (8 marks)

b. Dividend Discount Model (DDM). (5 marks)
4. A delicate balancing act on part of an analyst is required when valuing a company with inconsistent schedule of earning, or worse with no earning at all. In such instances, traditional methods of valuations becomes helpless, thus Price to Sales ratio comes into picture. Briefly explain the importance of Price to Sales ratio as an alternative for Price to Earning ratio for valuing a company. Also discuss the problems associated with Price to Sales ratio. [<Answer>](#)
(6 marks)
5. a. The concept of price patterns is based on the invariable occurrence of a transitional phase, which shows up as an intermediate trend, in between two major trends ie., from bullish phase to a bearish phase. Discuss the important principles to be borne in mind, while analyzing price patterns. [<Answer>](#)
(5 marks)

b. An important application of trend lines is identification of support and resistance levels. Briefly discuss what is support and resistance level? Also discuss the important principles to be considered while using support and resistance lines for trend analysis. (5 marks)

Telecom Industry

Industry Overview

India's telecom sector has shown massive upsurge in the recent years in all respects of industrial growth. From the status of state monopoly with very limited growth, it has grown in to the level of an industry. Telephone, whether fixed landline or mobile, is an essential necessity for the people of India. This changing phase was possible with the economic development that followed the process of structuring the economy in the capitalistic pattern. Removal of restrictions on foreign capital investment and industrial de-licensing resulted in fast growth of this sector. At present the country's telecom industry has achieved a growth rate of 14%.

With government of India setting up the Telecom Regulatory Authority of India (TRAI), and measures to allow new players, the featured products in the segment came in to prominence. Indian Telecom sector, like any other industrial sector in the country, has gone through many phases of growth and diversification. Starting from telegraphic and telephonic systems in the 19th century, the field of telephonic communication has now expanded to make use of advanced technologies like GSM, CDMA, and WLL to the great 3G Technology in mobile phones. Increasing competition among players allowed the prices drastically down by making the mobile facility accessible to the urban middle class population, and to a great extend in the rural areas. Even for small shopkeepers and factory workers a phone connection is not an unreachable luxury. With the growth of telecom services, telecom equipment and accessories manufacturing has also grown in a big way. Day by day, both the public players and the private players are putting in their resources and efforts to improve the telecommunication technology so as to give the maximum to their customers.

The Indian telecom sector can be broadly classified into Fixed Line Telephony and mobile telephony. The major players of the telecom sector are experiencing a fierce competition in both the segments. The major players like BSNL, MTNL, VSNL in the fixed line and Airtel, Idea, Tata, Reliance in the mobile segment are coming up with new tariffs and discount schemes to gain the competitive advantage. The Public Players and the Private Players share the fixed line and the mobile segments. Currently the Public Players have more than 60% of the market share.

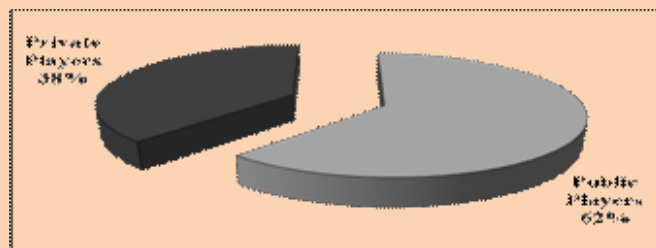
Market shares of Public and Private Players

Wireless segment has emerged as the preferred mode of telephone service by the consumers, reflected in the rising share of mobile phone connections to total connections. The share of mobile phones has increased from 71.69% at the end of March 2006 to 87.29% at the end of April 2008. While total mobile subscriber base was 269.3 million, wire line subscriber base was 39.21 million. Consequently, overall tele-density has increased to 26.89 % at the end of April 2008. India is likely to be second largest mobile market in the BRIC nations, with 560 million mobile users representing the next great growth curve for both mobile and interactive marketing industries.

Both fixed line and mobile segments serve the basic needs of local calls, long distance calls and the international calls, with the provision of broadband services in the fixed line segment and GPRS in the mobile arena. Traditional telephones have been replaced by the codeless and the wireless instruments. Mobile phone providers have also come up with GPRS-enabled multimedia messaging, Internet surfing, and mobile-commerce. The GSM, CDMA, WLL service providers are all upgrading themselves to provide 3G mobile services.

With the coming of more and more projects, the telecom industry is going for high scale recruitments. There is a huge demand for software engineers, mobile analysts, and hardware engineers for mobile handsets. Besides, there are ample opportunities for marketing people whose services are required to capture more and more customer base.

The new projects, setting up of new service bases, expansion of coverage areas, network installations, maintenance, etc. are providing more and more employment opportunities in the telecom sector.



The private sector has become the dominant player in the industry. While public sector companies added 53.6 million subscribers during 1998-2007, private companies have added a whopping 133.58 million subscribers during the same period. The dominance has been much more pronounced in the mobile market, where private operators have added 124.68 million subscribers, while public sector operators added only 31.79 million subscribers.

Divisions

The Indian telecom directory has two major divisions:

Fixed Service Providers (FSP's)

These include the basic service providers that are the state operators like MTNL India and BSNL India who collectively account to over 90% of the total basic telecom services and private sector telecom service providers in India who mainly focus on leased lines, ISDN, videoconferencing and other high-end services.

Cellular Service Providers (CSP's)

The cellular services in India are also categorized as GSM (Global Mobile Communications System) and CDMA (Code Division Multiple access) system. The leading GSM services providers in the Indian telecom industry 2007 are Hutchison or hutch (Now Vodafone and known as Orange in Maharashtra), Airtel, Idea Telecom, Tata, and Reliance. These include both pre-paid and postpaid mobile phone cards and services providers. The leading CDMA providers are still Reliance communications and Tata Indicom with Airtel and Touchtel just entering the market.

Manufacturing

Along with improvement in telecom services, there is also an improvement in manufacturing. In the beginning, there were only the Siemens handsets in India but now a whole series of new handsets, such as Nokia's latest N-series, Sony Ericsson's W-series, Motorola's PDA phones, etc. have come up. Touch screen and advanced technological handsets are gaining popularity. Radio services have also been incorporated in the mobile handsets, along with other applications like high storage memory, multimedia applications, multimedia games, MP3 Players, video generators, camera's, etc. The value added services provided by the mobile service operators contribute more than 10% of the total revenue.

India is emerging as a handset super-power as more manufacturers set up base in the country. It is not only the world's fastest-growing telecom market but it is also making remarkable progress in the telecom manufacturing space. Production in telecom equipment increased from US\$ 4.25 billion in 2005-06 to US\$ 5.64 billion in 2006-07 and touched US\$ 6.31 billion in 2007-08. The Department of Telecom (DoT), Government of India indicate that revenue from the telecom manufacturing sector is set to cross the US\$ 6.5 billion mark in fiscal 2007-08. The Indian telecom equipment manufacturing sector is set to become one of the largest globally by 2010.

Global players

Looking ahead, while mobile phone production is estimated to grow at a CAGR of 28.3% between 2006 to 2011 to total 107 million handsets by 2010, revenues are estimated to grow at a CAGR of 26.6 per cent between 2006 to 2011 to US\$ 13.6 billion.

Simultaneously, India's surging domestic market is also providing excellent investment opportunities in other segments of telecom equipment industry. For example, TRAI estimates that the country will need about 350,000 telecom towers by 2010, as against 125,000 in 2007. This has in turn attracted many leading global telecom equipment manufacturers to set up their base in India.

- Nokia Siemens Networks (NSN) is shifting its global services business unit headquarters from Munich to India.
- Nokia has set up its manufacturing plant in Chennai.
- Samsung has set up its GSM mobile manufacturing base in Manesar.
- Motorola has established a manufacturing plant in Sriperumbudur.
- Sony Ericsson has set up GSM Radio Base Station Manufacturing facility in Jaipur and R&D centre in Chennai.
- LG Electronics has set up plant of manufacturing GSM mobile phones near Pune.
- Elcoteq has set up handset manufacturing facilities in Bangalore.
- Eletronics has set up an SEZ in Chennai.

Other major companies like Foxconn, Asocomp, and Soletron among others have decided to set up their manufacturing base in India. In 2007 alone, US\$ 2 billion is expected to be made in the telecom manufacturing segment.

Value Added Services Market

India's runaway success in mobile telephony has also given a boost to the Mobile Value Added Services (MVAS) market. The Indian MVAS is poised to touch US\$ 926.3 million in 2007 and is likely to grow at a CAGR of 44% to US\$ 2.74 billion by 2010.

Government Initiatives

The Government has taken many proactive initiatives which has provided a framework for the rapid growth of the telecom industry.

- Opening the industry for private sector participation.
- 100 per cent FDI is permitted in telecom equipment manufacturing through the automatic route.
- FDI ceiling in telecom services has been raised to 74%.
- Establishment of an independent regulator - the Telecom Regulatory Authority of India (TRAI)-for the telecom sector.
- Introduction of a Unified Access Licensing regime for telecom services on a pan-India basis.
- Implementation of New Telecom Policy.
- Introduction of Calling Party Pay (CPP) regime and lowering of access deficit coupled with introduction of revenue share regime in ADC.
- Introduction of Mobile Number Portability in a phased manner, starting with the fourth quarter of 2008.
- Allowing service providers to share active infrastructure.

Road Ahead

The department of telecommunication, Government of India, estimated the total subscriber base to total 500 million by 2010, out of which 80 million are expected to be from rural areas.

The Indian telecom industry's revenue, likewise, is estimated to US\$ 35 billion, accounting for 3.6% of the total GDP of the country.

With such growth projection, this industry is likely to see increased investments. In fact, total investment is projected at US\$ 76.6 billion during the eleventh plan period (2007-12). Private sector is estimated to continue its dominant share, accounting for 67% of the total projected investment while public sector accounts for the rest.

Growth

In 2005-2006, the telecom industry witnessed a growth of 21% with a total revenue of Rs. 86,720 crores, and the total investment rising to Rs. 2,00,660 crores. It is projected that the telecom industry will be enjoying over 150% growth in the next 4-6 years. The growth also requires a huge investment by the players in the sector. Bharti Airtel is planning to invest about \$8 billion by the year 2010.

Liberalization policy and some socio-economic factors are mainly responsible for the immense growth in the sales volumes. The lifestyle of the people has changed. They need to be connected to the other people all the time. With the lowering down of the tariffs the affordability of the mobile phones has increased. Mobile service providers are also expanding their coverage area by installing more and more antennas and other equipments.

The telecom sector in the country has already adopted the latest technological advancements to cater to the demands of the growing market. Telecom Expo India, Convergence India, VAS India and IPTV India being organized year to year are all efforts in this direction.

In budget 2007, mobile service providers have been asked to cut down their roaming rentals as well as their long distance and international call tariffs. This has led to discontent on the part of the service providers. However, Telecom Regulatory Authority of India (TRAI) is of the opinion that this will lead to increased use of roaming, which will ultimately lead to more revenue generation. Moreover, with cheaper handsets and lesser tariffs, it is expected that by the year 2010 there will be over 500 million subscribers in the Indian telecom market.

Also, the telecom industry will be focusing more on rural areas to connect them with the urban areas so that the farmers and the small-scale industries can have faster access to information related to weather and market conditions.

With the rapid increase in the telecom and IT industry in India, the major cities in India including New Delhi, Mumbai, Kolkata, Chennai, Ahmedabad, Bangalore, Hyderabad, Pune, Gurgaon, Noida have registered new records in the sale of various telecom products and solutions.

A new industry upcoming in the telecom sector of India is the telecom outsourcing or Business Process Outsourcing (BPO). The BPO industry in India is based in the IT hubs mainly Gurgaon, Noida, Bangalore, Hyderabad, Pune, Chennai, New Delhi, Mumbai and other cities.

The Indian telecom industry shows newer telecom business plans everyday. It includes telecom engineering courses, telecom market analysis about the new trends of the market, development of telecom network infrastructure, formulating telecom technologies and their updates by doing proper research in the field, and taking up major telecom projects for providing telecom network solutions to all.

More and more international telecom companies are diverting their telecom technologies towards Indian Telecom sector, in order to confirm their telecom market share in India. This has also created mass telecom jobs in India; the Indian telecommunications industry provides many job opportunities especially with the BPO sector job openings.

For a more inclusive economic growth, it is critical to take telecom services to the masses and more importantly to the rural areas. Reduction in network roll out costs and even lower tariff is therefore necessary for a faster roll out of these services in rural areas.

Metcash Telecommunications Ltd. (MTL)

Metcash Telecommunications Ltd. (MTL) is a part of the \$29 billion Metcash Group. A leading provider of a new world of communications was incorporated in the year 1980. The company offers services such as fixed telephony, mobile telephony and Internet services. It also offers other services like MPLS VPN, Internet telephony and leased circuits. The company is in the fields of transmission, IP, converged voice, mobility, managed network connectivity, hosted data center, communications solutions and business transformation services to global and Indian enterprises and broadband and content services to Indian consumers.

The company has benchmarked in Intelsat Business Service in the year 1992, a dedicated satellite-based service that provides high speed, high quality data circuits on a point-to-point basis through earth stations strategically located near the customer's premises and also has entered the era of mobile communications by commissioning its own Land Earth Station (LES) at Arvi near Pune. During the period 1993, the company introduced Inmarsat-C service, which permits transmission of messages via small portable terminals and a video conferencing service (both domestic and international) through studios located at the company's international gateways at Mumbai, New Delhi, Calcutta and Chennai. In 1994, the company had a co-operation with British Telecom, UK and launched the Concert Packet Service (CPS) for Indian customers. The company started providing Internet access services in August of the year 1995, provided access to the Internet in Mumbai, Chennai, New Delhi, Calcutta, Bangalore and Pune and also a dominant commercial provider of access to the Internet in India. The company sets up two Standard 'A' Intelsat earth stations, one at Halisahar (Calcutta) and second at Korattur (Chennai). In 1996, the company has signed a Construction and Maintenance Agreement for the Fibre Optic Link Around the Globe (FLAG).

Market

The expansions of MTL's global voice network and all areas represents further execution of the company's mission to expand its global reach and ability to deliver IP-leveraged communications solutions to businesses and deliver a new world of communications to consumers worldwide.

The global reach and industry expertise of MTL drives and delivers a new world of communications. The company leverages its global network, vertical intelligence and leadership in emerging markets to deliver value-driven, globally managed solutions.

MTL has its offices in 80 cities across 40 countries, reflecting the diversity of the customers and markets we live in and serve. MTL's unique market strategy and industry expertise enables the company to deploy a comprehensive portfolio of communications solutions

to customers in existing and emerging markets worldwide. With a strategic investment in the South African operator Neotel, Tata Communications possesses a strong anchor to build an African footprint.

The company unites the industry and market expertise of various players to become the leading integrated provider of telecommunications solutions.

Technology

MTL has developed the most advanced and largest submarine cable networks, a Tier-1 IP network, and connectivity to more than 200 countries across 300 PoPs.

Valuation

During the year 2007-08, MTL has undertaken an expansion plan and has incurred a total capital expenditure of Rs.512.48 crores. With this expansion plan, the company expects its net profit to grow @ 12.5% p.a. during the next four years and will stabilize at 10.5% p.a. thereafter. The company also plans to maintain the current level of dividend payout ratio of 31% in future. Currently, the company maintains a debt financing ratio of 0.35. It plans to maintain the same level of debt financing ratio even after the expansion. The effective tax rate applicable to the company is 30%. The CFO of the company has provided with following additional information pertaining to company's operations:

(Rs. in crores)

Particulars	2008-09	2009-10	2010-11	2011-12
Capital Expenditure	425	325	215	185
Depreciation	325	265	195	165
Total Net Current Assets	410	496	518	545

From the fifth year onwards, any capital expenditure incurred by the company is expected to be offset by depreciation. The changes in working capital are expected to be negligible.

Profit and loss account of Metcash Telecommunications Ltd. as on 31st

(Rs. in crores)

Particulars	March 2008	March 2007	March 2006	March 2005	March 2004
Income					
Net Sales	4,041.83	3,780.95	3,303.04	3,163.54	4,538.55
Expenses					
Material Consumed	1.61	1.95	1.65	0.72	0.90
Manufacturing Expenses	2,301.46	2,165.30	1,894.37	1,790.94	2,545.87
Personnel Expenses	243.69	209.06	141.28	138.24	153.64
Selling Expenses	77.30	129.58	71.98	25.48	11.66
Administrative Expenses	472.09	385.33	399.96	677.42	646.00
Cost Of Sales	3,096.15	2,891.22	2,509.24	2,632.80	3,358.07
Operating Profit	945.68	889.73	793.80	530.74	1,180.48
Other Recurring Income	120.20	179.62	104.09	195.03	298.43
PBDIT	1,065.88	1,069.35	897.89	725.77	1,478.91
Financial Expenses	16.74	13.56	9.62	14.07	11.94
Depreciation	391.33	359.56	244.15	172.07	147.02
PBT	657.81	696.23	644.12	539.63	1,319.95
Tax Charges	244.07	207.17	297.61	165.60	475.77
PAT	413.74	489.06	346.51	374.03	844.18
Equity Dividend	128.25	128.25	171.00	128.25	242.25

Balance sheet of Metcash Telecommunications Ltd. as on 31st

(Rs. in crores)

Particulars	March 2008	March 2007	March 2006	March 2005	March 2004
SOURCES OF FUNDS					
Owner's Fund					
Equity Share Capital	285.00	285.00	285.00	285.00	285.00

Reserves & Surplus	6,074.50	5,776.17	5,443.05	4,882.18	5,265.42
Loan Funds					
Secured Loans	0.00	0.00	0.00	0.00	354.00
Unsecured Loans	197.61	98.25	0.00	63.00	0.00
Total	6,557.11	6,159.42	5,728.05	5,230.18	5,904.42
USES OF FUNDS					
Fixed Assets					
Gross Block	4,582.98	4,099.64	3,182.68	2,348.54	3,290.23
Less : Accumulated Depreciation	1,428.81	1,091.08	835.65	590.80	1,015.19
Net Block	3,154.17	3,008.56	2,347.03	1,757.74	2,275.04
Capital Work-in-progress	340.44	147.81	513.17	216.63	114.23
Investments	2,673.58	2,499.34	1,200.58	2,089.14	655.87
Net Current Assets					
Current Assets, Loans & Advances	2,447.42	2,509.43	3,646.14	3,143.32	4,567.52
Less : Current Liabilities & Provisions	2,058.50	2,005.72	1,978.87	1,976.65	1,708.24
Total Net Current Assets	388.92	503.71	1,667.27	1,166.67	2,859.28
Total	6,557.11	6,159.42	5,728.05	5,230.18	5,904.42

Annexure - I**Closing values of Equity Shares of Metcash Telecommunications Ltd. and S & P CNX Nifty**

Date	Share price of MTL (Rs.)	S&P CNX Nifty
January 2008	475	5137
February 2008	490	5334
March 2008	515	4735
April 2008	519	5165
May 2008	540	4870
June 2008	480	4136

END OF SECTION D**Section E : Caselets (50 Marks)**

This section consists of questions with serial number 6 - 12.

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. Though MF industry in India is rapidly growing in tune with the growth of the Indian economy, it comes across various challenges. Discuss the various challenges faced by the MF industry. (8 marks) [<Answer>](#)
7. 'Despite all the facts investors make common mistakes while investing because they react based on intuition and hunches etc.' According to the caselet discuss, what are the common mistakes investors make while investing in mutual funds. (8 marks) [<Answer>](#)

A mutual fund (MF) is a trust that pools money from a cross-section of investors by issuing units, constructs a diversified portfolio of stocks, bonds and other investment instruments, and invests the same in the capital and other markets.

The Indian MF industry has grown in terms of Assets Under Management (AUM), number of Asset Management Companies (AMCs), types of investors, number and variety of schemes and the number of distributors participating in the industry. As on February 2008, the industry comprised 32 AMCs, 1644 schemes and crossed 36 million folios. The MF industry is growing at an average rate of 16-17% because of the entry of commercial banks and the private players coupled with the rapid growth of the Indian capital market. Even then India ranks 25 in the AUM of the global MF industry.

The MF industry in India is rapidly growing in tune with the growth of the Indian economy, although it faces a lot of challenges such as lack of awareness towards the industry, risk return trade-off etc. The more significant reason for this stupendous growth has been the regulatory changes introduced by the SEBI, in the past two years. In January 2008, the SEBI asked MF companies not to charge any load from small investors who approached them directly for buying units, instead of going through brokers. This move has helped cut costs for investors and made fund operations more transparent.

The Indian MF industry is mostly concentrated among High Net Worth Individuals (HNWIs). Irrespective of the many players, the MFs today didn't gather a large investor base. The urban investors are playing a major role in the industry, but should be diversified into rural and suburban areas, where there is a vast potential market. High costs, low awareness and low penetration remain the biggest bugbears in the MF industry. The industry is also competing with insurance companies that have launched a range of products with a similar structure, for the same set of investors.

The MFs are now conducting investor awareness programs at various centres across the country. Investors' relations centres are spread over the country to redress the investors' grievances.

Despite all the facts investors make common mistakes while investing because they react based on intuition and hunches etc. Being conscious of what happened to a fund's returns in the past, investors should be very careful in predicting the likely range of the fund's returns in the future. The greater is the range, the more risky are the fund's prospects. It is difficult to predict the behavior of investors as they belong to different cultures, lifestyles, educational levels, social status, income groups and religions.

Besides all the consistency, the performance of MFs has been a major factor that has attracted many investors. The Indian MF industry has been reformed by making its operations much more transparent than ever before. In a nutshell, it can be said that the future performance of the MFs will be better than in the past.

END OF CASELET 1

Caselet 2

Read the caselet carefully and answer the following questions:

8. India which has been ignored for so long has begun to feature prominently on the investment map of Islamic investors who are on the lookout to expand beyond their traditional markets. Discuss why India became a destination of Islamic investment? (7 marks) [<Answer>](#)
9. What are the various developments that took place in India towards Islamic investments? (7 marks) [<Answer>](#)
10. Briefly discuss the obstacles that are being faced by Islamic investment in India. (6 marks) [<Answer>](#)

Islamic investment has come a long way since its active reintroduction about 25 years ago. In simple words, Islamic investment refers to the investment that is carried out in ways which does not conflict with the principles of Islam and the Fatwa. The current Muslim population of the world is estimated at about 1.5 billion, representing a sizeable 24% of total world population. This number is expected to rise by 2.9% on a year-to-year basis. The demand among the Muslims for financial services is increasing as West Asian nations harvest the windfall in oil revenue due to oil prices. Islamic finance, which is currently valued at \$800 bn, is expected to grow at a rapid pace of 15% to 20% annually. The total investible wealth available in the Muslim world is estimated at \$1.5 tn to \$1.7 tn. Hence, there is a need for the development of financial products that meet the target of Islamic investments.

Though Islamic investment is gaining ground in many parts of the world, Indian Muslims are not joining the bandwagon. Even educated Muslims are not sure if they can invest in the stock market. As a step towards this direction, Parsoli Corporation, one of the two brokerage houses in India that offer formal Shari'ah-complaint services, organized what it bills as the first "Islamic Investment Opportunities" Conference in Mumbai in March 2007.

In the recent past, there has been a marked increase in investment inflows from Islamic countries. India, which has been ignored for so long, has begun to feature prominently on the investment map of Islamic investors who are on the lookout to expand beyond their traditional markets. Islamic investors are now looking for alternative destinations owing to fear of freezing of their accounts in Europe and North America due to political and other developments in the last few years. Though China and India are projected to be the largest economies of the world, India offers some clear advantages over China in being the largest democracy, operating a legal framework that protects foreign investors, abundance of managerial and technical skills, etc. Tata Select Equity Fund is the only Shari'ah-compliant mutual fund in India.

In the last decade, the global capital markets, especially the emerging capital markets of Brazil, Russia, India and China (BRIC) economies, underwent a radical change in terms of standards laid down by International Organization of Securities Commissions (IOSCO). Global investors, at large, have shifted their focus from the developed economies to the emerging economies like South-East Asia, India and China. Parallely, Islamic Capital Markets (ICMs) have gained momentum in view of the ever-increasing demands for the newer ways of investment and innovative products based on Islamic principles.

The Islamic Capital Market (ICM), as the name suggests, refers to the market where activities are carried out according to Shari'ah principles of Islam. The rules and regulations in Islamic investment are governed by the Shari'ah law. Shari'ah allows investment in equity shares but only in equity shares of Shari'ah-compliant companies. Shari'ah Law allows investment in companies as long as they do not indulge in activities prohibited by Shari'ah such as lending, gambling or the production of alcohol, tobacco, stock broking or share trading in non-Shari'ah-approved securities, advertising and media and trading of gold and silver in certain forms. Shari'ah-

compliance screening is not only sector-based but also accounting-based. Certain financial ratios of companies may be non-compliant. The growing awareness and demand for investing in accordance with Islamic principles on a global scale has created a flourishing ICM due to increasing wealth in the hands of Muslim communities globally who are actively involved in corporate and business activities. The ICM runs parallel to the conventional capital market and provides investors with an alternative investment philosophy. The fact that the ICM does not prohibit participation of non-muslims, broadens the scope of this market. Malaysia has been recognized as the pioneer and at the forefront in Islamic finance.

In a recently-concluded international conference on Islamic investment, approval given to Islamic products called 'Sukuk' (Islamic bonds) is appreciated because it will facilitate large inflows of funds into India seeking Islamic ventures for profitable investment.

Thus, looking at the developments that take place in Islamic investment scenario in India, it can be concluded that the secular India is providing a great opportunity for Islamic investment.

END OF CASELET 2

Caselet 3

Read the caselet carefully and answer the following questions:

11. Even though PN-holders do not own the shares directly, they are able to collect dividends or capital gains that accrue from the underlying assets. Discuss briefly, how PNs have become a preferred destination for international investors? (8 marks) [<Answer>](#)

12. For regulatory agencies, PNs are a major irritant because they are opaque instruments belonging to faceless investors. Briefly discuss, how PNs are regulated in Indian capital market? (6 marks) [<Answer>](#)

In the current globalization regime, everyone is looking for opportunities worldwide. The capital market is the most happening place for making money in short-term. Investors, issuers and brokers are the most dominating characters in the capital market. Once we recall Foreign Institutional Investors (FIIs), most influencing nature in Indian capital market, automatically Participatory Notes (PNs) come into picture. PNs have always been known for the controversies they create. Every now and then, the Securities and Exchange Board of India (SEBI) and Reserve Bank of India (RBI) have been making regulations and putting restrictions on PNs. PNs have been associated with Indian capital market for a long time but they are unable to gain the confidence of investors.

PNs is a derivative instrument issued by Foreign Institutional Investors (FIIs) to market participants who do not reveal their identities or are not registered with the Indian regulator. The invention of this product was necessitated as many fund managers did not want to register with the SEBI (such as FIIs), but still wanted to participate in the stock market. PNs confer anonymity on those who hold them. It allows investors to build portfolios depending on their preference for individual shares. Brokerages affiliated to FIIs buy India-based securities and then issue PNs to foreign investors. The instrument is issued through the sub-accounts of registered FIIs operating in Indian markets. Even though PN-holders do not own the shares directly, they are able to collect dividends or capital gains that accrue from the underlying assets. However, the velocity of circulation of this instrument is enhanced by the fact that it can be traded in international capital markets, which is why foreign investors find it attractive.

There are two kinds of PNs spot-based and offshore derivatives/futures-based. The offshore derivative instruments are based on other underlying instruments. The latter account for around 32-33% of all total outstanding PNs. On October 2007, SEBI orders ban on issue of fresh PNs on derivatives instruments and the current positions through PNs underlying as derivatives will have to be wound up within 18 months.

PNs have been under the regulatory lens for years. For regulatory agencies, PNs are a major irritant because they are opaque instruments belonging to faceless investors. But, more importantly, from a wider economic perspective, they amplify the risks associated with volatility in financial markets. There are about 1000 FIIs registered with the SEBI. Of these, only about 34 are both stockbrokers and institutional investors. Merrill Lynch, Morgan Stanley, Credit Lyonnais, Citigroup and Goldman Sachs are among the prime issuers of PNs. They buy Indian stocks for their clients as well as on behalf of those who do not wish to be registered in India that is mainly hedge funds. These 34 brokers have issued offshore derivatives to the tune of about \$100 bn, which is almost 10% of the country's GDP.

SEBI has imposed regulations on those who can register as FIIs. Regulatory authorities have imposed limits on the kind of strategies that they can adopt in the Indian markets. It is clear that a ban, or at least a series of steps aimed at enforcing a ban over a clearly defined time-frame, is not only prudent from a regulatory perspective but also necessary for macroeconomic stability. Routing money through PNs is the anonymity it offers. These conspired to drive the massive rise in PNs.

The structure on PNs may affect liquidity flows into the equity market. However, the continued robust economic growth can attract investors with a longer-term commitment that can make up for the temporary thinning of inflows. Only time will tell whether this diktat by the SEBI will be in the interest of the investors or whether it will help usher in a deep correction in the market.

END OF CASELET 3

END OF SECTION E

END OF QUESTION PAPER

Suggested Answers

Security Analysis - II (MSF2D2): October 2008

Section D: Case Study

1.a. Structural Analysis**Threat of Entry**

Telecom industry is a capital-intensive industry. Only large players with deep pockets can enter the market and operate successfully.

There should be high access to distribution channels.

The industry faces pressure of high obsolescence. As the industry is highly technology-intensive the companies, to survive, are required to remain alert to the changes and adapt accordingly.

Threat of substitution

The major threat of substitution includes the internet and internet telephony. Due to cost effectiveness it is best suited for today's environment. It is a major threat of substitution for the ongoing telephony system. However, with limited connectivity of broadband services in all areas this substitution is still in the nascent stage.

Intensity of Rivalry among existing players

With the opening of the private sector and entry of foreign investments few firms with relatively balanced size and resources have started operations thereby competing with each other.

Choice of the buyer in this industry is largely based on the price and service which leads to competition among players.

The industry is highly technology-intensive which results in intense competition among the players to innovate new products.

The industry has high exit barriers as the industry has specialized assets and the players also attach high strategic importance to being in the business.

Although the sector is opened to private competition the industry's fate is susceptible to Government's policies. Government plays an important role in the telecom industry by fixing the tariff rates, customs duty, service tax etc.

Bargaining power of buyers

The bargaining power of buyers tends to be high because of low product differentiation.

Bargaining power of sellers

For equipment manufacturers, raw material providers are the sellers and for services providers government is the seller of services. Bargaining power of Government is high but bargaining power of raw material providers is moderate.

b.

(Rs. Crores)

Year	2008	2007	2006	2005	2004
Net sales	4,041.83	3,780.95	3,303.04	3,163.54	4,538.55
Profit Before Tax	657.81	696.23	644.12	539.63	1,319.95
Profit After Tax	413.74	489.06	346.51	374.03	844.18
Net worth	6359.5	6061.17	5728.05	5167.18	5550.42
Total Assets	8615.61	8165.14	7706.92	7206.83	7612.66

Year	2008	2007	2006	2005	2004
(NS/TA)	0.4691	0.4631	0.4286	0.4390	0.5962
(TA/NW)	1.3548	1.3471	1.3455	1.3947	1.3715
(PBT/NS)	0.1628	0.1841	0.1950	0.1706	0.2908
(PAT/PBT)	0.6290	0.7024	0.5380	0.6931	0.6396
Return on equity (ROE)	0.0651	0.0807	0.0605	0.0724	0.1521

The return on equity measures the profitability of equity funds invested in a firm. Return on equity is on a declining trend from 2004 to 2008 except in 2007 where it has risen from the previous level. This shows that the productivity of capital employed in the firm is not appropriate. The total asset turnover ratio (except in 2007) has declined. It shows that there is an increase in the costs. Also total asset to net worth has increased in 2005 and then a decline except in 2008 where there is a marginal increase. This shows a decline in the profitability of the firm.

2.a.

[< TOP >](#)

Monthly Return on stock of MTL (%) (y)	
3.16	7.62
5.10	22.09
0.78	0.14
4.05	13.32
-11.11	132.48

Mean return on the stock = 0.40%

The monthly standard deviation of the return of MTL stock = 6.63%

Probability that the monthly return will be between 1% and 3% can be calculated as follows:

or $0.09 < Z < 0.39$

From the normal distribution table, the area for

$0.09 \rightarrow 0.0359$

$0.39 \rightarrow 0.1517$

$Z = 0.1517 - 0.0359 = 0.1158 = 11.58\%$

b. Returns from Stock of MTL and S & P CNX Nifty can be regressed to estimate the beta of MTL.

Returns from Stock (Y)	Returns from S & P CNX Nifty (X)	$Y - \bar{Y}$	$X - \bar{X}$	$(Y - \bar{Y})^2$	$(X - \bar{X})^2$	$(Y - \bar{Y})(X - \bar{X})$
3.16	3.83	2.76	7.65	7.62	58.52	21.11
5.10	-11.23	4.70	-7.41	22.09	54.91	-34.83
0.78	9.08	0.38	12.92	0.14	166.93	4.91
4.05	-5.71	3.65	-1.89	13.32	3.57	-6.90
-11.11	-15.07	-11.51	-11.25	132.48	126.56	129.49
1.98	-19.10			175.65	410.49	113.78

$\bar{Y} = 1.98 / 5 = 0.40$

$\bar{X} = -19.10 / 5 = -3.82$

$\sigma_Y^2 = 175.65 / 5 = 43.91(\%)^2$

$\sigma_X^2 = 410.49 / 5 = 102.62(\%)^2$

$\text{Cov}_{xy} = 113.78 / 5 = 28.45(\%)^2$

Beta = $28.45 / 102.62 = 0.28$

Total systematic risk = $\beta^2 \sigma_X^2 = 0.28^2 \times 102.62 = 8.05(\%)^2$

Total risk = $\sigma_Y^2 = 43.91(\%)^2$

Unsystematic risk = $43.91 - 8.05 = 35.86(\%)^2$

Proportion of unsystematic risk = $35.86 / 43.91 = 0.8167 = 81.67\%$

Since the proportion of unsystematic risk exceeds 45%. Hence, the stock is not suitable for the investor.

3.a. As per FCFE Approach,

[< TOP >](#)

Free cash flow to equity = Net Profit – (Capital expenditure – depreciation + changes in net working capital) (1-Debt financing ratio)

(Rs. in crores)

Particulars	FY08	FY09	FY10	FY11	FY12	FY13
A. Growth rate		12.5%	12.5%	12.5%	12.5%	10.5%
B. Net Profit	413.74	465.46	523.64	589.10	662.74	732.33
C. Capital Expenditure	512.48	425	325	215	185	
D. Depreciation	391.33	325	265	195	165	
E. Changes in working capital	-114.79	21.08	86	22	27	
F. Net Capital Expenditure (C – D + E)	6.36	121.08	146	42	47	
G. Net Capital Expenditure × (1- debt financing ratio)	4.13	78.70	94.90	27.30	30.55	
H. Free cash flow to equity (B – G)		386.76	428.74	561.80	632.19	732.33
I. Present value @ 18.33%		326.85	306.20	339.10	322.45	4770.52*

Cost of equity = $R_f + \beta(R_m - R_f) = 7.5 + 1.14 \times 9.5 = 18.33\%$

*Terminal value =

Present Value =

Value of equity as per FCFE approach

= 326.85+ 306.20+ 339.10+ 322.45+ 4770.52 = Rs.6065.12 crores.

b. As per DDM approach

= $(128.25 \times 1.125)PVIF(18.33\%,1) + (128.25 \times 1.125^2)PVIF(18.33\%,2) + (128.25 \times 1.125^3)PVIF(18.33\%,3) + (128.25 \times 1.125^4)PVIF(18.33\%,4) + \frac{[(128.25 \times 1.125^4)(1.105)]}{(0.1833-0.105)}PVIF(18.33\%,4)$

Value of equity = Rs. 1931.58 crores.

4. Valuing a company with inconsistent schedule of earning, or worse, with no earning at all requires a delicate balancing act on part of the analysts. At these instances, traditional methods of valuations befall to helplessness. That's where the price/sales ratio comes in. Just like its more popular alternative the P/E ratio, PSR (Price-to-Sales Ratio) is useful to value any company. Price-to-Sales Ratio for a company can be calculated by dividing the market capitalization of a company by its total revenue for the last four quarters. As compared to PE ratio, Price-to-Sales Ratio is a more reliable measure because, unlike earnings, revenue for a company is difficult to manipulate. Besides earnings is a complex figure which may include inflows from non-recurring events also. Therefore, analysts look to both the PE ratio and PS ratio of companies before taking any investment decision. PS ratio is useful while valuing companies even with no earnings at all. PS ratio comes handy to value companies in today's dynamic set-up where mergers and divestitures are a part of the daily routine. For examples, need for economy of scale has driven companies in telecom sector for sometime. Owing to write-offs related to merger, several such companies report negative earnings soon after the process. However, strategically and fundamentally, the company may well be on its way to a bright future. This can be verified by analyzing the Price-to-Sales Ratio, which may be growing immediately after the merger, thus presenting a more realistic presentation of the prospect for the company.

[< TOP >](#)

Like any other ratio, a high or low PS ratio connotes different interpretations for an analyst. High or low PS ratio depends on the profit margin of the company. Thus, PS ratio for a steel manufacturer may vary from the PS ratio for a chip maker.

Price-to-Sales Ratio may also vary consequent to the capital structure of the company. A company with a lot of debt component in its balance sheet may have to allocate more resources for servicing the interest burden, and thus might see erosion in its profits. Another problem with PSR is that sales figure does not contain any information about the debt burden of the company. Thus, it may so happen that some companies may have no profits but only huge debt and could be on the verge of bankruptcy. Due to all these, it is advisable to compare both the PE ratio and PS ratio for the company on a historical basis for a reliable analysis.

Mathematically, relationship between these two ratios can be established P/E Ratio x (Profit Margin)

- 5.a. The following are important principles to be borne in mind, while analyzing price patterns:

[< TOP >](#)

- i. The significance of a pattern is a direct function of its size and depth. The longer a pattern takes to complete and greater the price fluctuations within the pattern, the more substantial the ensuing move is likely to be.

The fluctuations that occur indicate the combat between buyers and sellers. The longer it takes for prices to break through a pattern, the greater is the significance of the penetration.

- ii. The longer it takes for prices to move out of the pattern, the stronger is the base of the new trend. This is due to the presence of both uninformed investors and professionals in the market.

When the prices hit a new low, uninformed investors panic, and start selling. Professionals would, however, accumulate stocks in anticipation of improved conditions in the future. The stocks therefore move from weak to strong hands. The reverse process occurs at the market tops. The professionals who accumulated stocks at the bottom, sell to uninformed investors who are attracted by the rising prices, and buy these stocks. Thus at market bottoms, the base from which prices rise is strong, as most stock has moved into the hands of professionals. At market tops, the reverse is true as most stock is in the hands of less sophisticated investors, and triggers a sharp fall in prices.

- iii. Price patterns offer certain forecasting possibilities, because the duration of a trend can be measured, with a certain level of accuracy, on the price charts.

- iv. A valid breakout can be confirmed, in most cases, if the penetrations of the boundaries of a pattern are marked by price change equal to or more than 3%.

- v. The validity of a breakout should be confirmed by volume statistics. Volume advances with rising prices and declines with falling prices. A divergence from this relationship throws up important signals.

- b. Resistance is defined as 'Selling, actual or potential, sufficient in volume to satisfy all bids and hence stop prices from going higher for a time period'. Support is defined as 'Buying, actual or potential, sufficient in volume to halt a downtrend in prices for an appreciable period'.

A support zone is formed when the demand supply balance tilts in favor of buyers, resulting in a concentration of demand. A resistance zone similarly represents a concentration of supply.

The support and resistance levels are important tools in conforming a reversal in forecasting the course of prices, and in making appropriate price move. The following principles are to be applied while using support and resistance lines for trend analysis.

- i. Support and resistance lines are only approximates of the levels, prices may be expected to 'obey'. They should, therefore, be drawn using judgement, and clues from the past price behavior.
- ii. Penetration of a support or resistance line, also confirmed by an underlying price pattern, is a fairly sure indication of a strong ensuing move in the same direction. New highs are reached after resistance line is penetrated and new low follow penetration of a support line.
- iii. Prices are said to remain in a 'congestion zone' as long as they fluctuate in narrow ranges within a support and resistance level. The direction of breakout from a congestion zone cannot be predicted in advance.

- iv. The higher the volume accompanying the confirmation of a support or resistance level, the more its significance.
- v. The speed and extent of the previous move determines the significance of a support or resistance level. Prices penetrate support (resistance) level generally after slowing down from a previous low (high) and hovering around a level for sometime. Support and resistance levels repeat their effectiveness time and again, even if separated by many years.

Section E: Caselets

Caselet 1

6. The various challenges faced by the mutual funds industry are:

[< TOP >](#)

- i. Bank deposits are considered the biggest competition to MF products. With complete safety, assured returns and liquidity, bank deposits are the first preference of the households. The AUM of the MF industry is only 9% of the total bank deposits in India. There are national savings, post-office savings, etc. Insurance is also emerging as an important investment vehicle.
- ii. The main reasons for not investing in MFs are the issue of safety of capital and lack of trust and knowledge about the concept. The investors also think that they can make money by investing directly in stocks rather than investing through MFs. The lack of awareness among the rural and semi-urban investors is curtailing the growth of the MF industry in these areas.
- iii. When compared to foreign MF industry, the schemes offered by the Indian MFs are very few and do not suit all the requirements of the investors. Mutual funds in developed countries like the US and the UK offer diversified products/services ranging from purchase of cars to admission in universities.
- iv. Lack of clarity about the risks associated with new and existing schemes, poor transparency in the computation of Net Asset Value (NAV) and lack of marketing efforts on the part of the MF firms are the other issues that are keeping the investors away from the MFs.

7. **Buying Only on Last Year's Performance**

[< TOP >](#)

In any market environment, some funds produce phenomenal returns. Surprisingly, too often last year's best performers can be this year's laggards. Investors normally have a tendency to see how the fund has performed in the immediate past than studying the entire performance history of the fund.

Acting on Intuition and Hunches

It is very unfortunate that even mutual fund investors invest based on intuition and hunches than by studying the performance of the funds. It is true that no one can consistently forecast market trends.

Over-diversifying or No Diversification

Out of anxiousness and extra care, many investors make investments in many mutual funds expecting to derive the benefits of diversification. In the process, they end up having an over-diversified state. In contrast to this, few other investors make investments in only one mutual fund on a trial basis and the moment they don't realize their expected returns, develop reluctance to mutual funds.

Selling too Soon

During some periods, the markets will favor certain funds. When the trend lacks fund performance, the group will suffer. The moment there is a halt in the growth or even if there is a slight fluctuation, investors tend to rush to sell off their investments and, thereby, lose the opportunity of gaining from the rebounds when those funds return to favor.

Caselet 2

8. In view of stronger fundamentals of Indian equity markets, the overseas Islamic financial institution investors, specifically those from Arabian Gulf, found India as a hot destination for equity investments. Ideally, India with a 13% Muslim population, the highest in a non-Islamic country, is in the forefront of Islamic finance activities. The current share of the Indian Shari'ah-compliant market capitalization at 61% is the highest even when compared with a number of Islamic countries such as Malaysia (57%) and Pakistan (51%). The growth in market capitalization of Indian Shari'ah-compliant stocks was more impressive than the growth in market capitalization of non-Shari'ah-compliant stocks. Even with lesser number of Shari'ah-compliant stocks, the share of Shari'ah-compliant market capitalization never went below 50% of the total market capitalization. Thus, it can be interpreted that, India with 61% Shari'ah-compliant market capitalization, with the credit of having the second largest number of listed companies at the global level and with a projected GDP growth rate of 9%, has a great potential to become the hub of Islamic investment activities.

[< TOP >](#)

9. Islamic finance is gaining ground in India following an aggressive campaign by Shariah-compliant brokerages. These firms are beginning to identify markets with high potential and set up shop in those areas. One such firm, Parsoli Corp Ltd. (PCL), has already identified as many as a 100 locations where there is a potential of garnering a share of Islamic investment.

[< TOP >](#)

As far as the number of Shari'ah-compliant stocks is concerned there are more than 840 Shari'ah-compliant stocks in the indices of Bombay and National Stock Exchanges, which according to the study is higher than the sum total of Shari'ah-compliant listed stocks in countries like Malaysia, Pakistan, Indonesia and the GCC countries.

'Tata Select Equity Fund' is the only Shari'ah-compliant mutual fund in India. It is time that Indian mutual fund managers floated a number of specific Shari'ah-compliant funds thus creating demand among the Muslim investors. In this regard, the 2i Capital Group, which operates in India, in consortium with Oman-based annual investment SAOC, has launched a \$300 mn offshore Shari'ah-compliant Indian Infrastructure Development Fund. The objective of this Shari'ah-compliant fund is to tap investors from Gulf Cooperation Council (GCC) countries. Saudi Arabia, Bahrain, Kuwait, Oman, Qatar and the United Arab Emirates.

The Standard Chartered Bank, which is providing Islamic banking services in 57 countries, has sought permission from the Reserve Bank of India and the Government of India to allow it to provide Islamic banking facilities in India.

In a recently-concluded international conference on participatory banking for all, a strong appeal was made to the government, the savings in accordance with their religious faith by establishing regulatory mechanism for establishment of participatory banks in India. The conference also appreciated the approval given to Islamic products like 'Sukuk' (Islamic bonds) which will facilitate large inflows of funds into India seeking Islamic ventures for profitable investment.

- 10 The Indian corporates have not quite begun marketing their stocks to Islamic institutions and wealthy investors who stick to the Shari'ah. The only sector which is trying it out is the real estate. In recent years, investors from Dubai and other parts of the Gulf have put money in Indian realty. Such investments may have been driven by the compulsions of Shari'ah because property and construction significantly are activities which the Shari'ah endorses.

[< TOP >](#)

One obstacle in the growth of Islamic investment in India is the derivatives market. Though derivatives trading are growing in India, it becomes an entirely different matter as far as Shari'ah compliance is concerned. Derivatives appear to be more at odds with the Islamic principles of finance which also prohibits speculation. Many derivative products are by nature, speculative and by definition they do not comprise physical assets. They are derived from some underlying assets without necessarily owning or participating in other, tangible thing. The keystone of the Islamic finance is that the return on financial instruments must be based on physical, tangible assets.

Caselet 3

11. PNs became the preferred choice for international investors because

[< TOP >](#)

- They could avoid registration procedures.
- They had flexibility in investment.
- They found it an easy route at minimum cost.
- They could decide the holding period and withdraw investment at any time of their choice.
- They were guaranteed fixed returns.

The FIIs issuing PNs are almost running a parallel Indian derivative exchange. PN holders in derivative markets also enjoy high leveraging opportunities in the same securities in which the investor takes position in the cash market. PN derivatives became the preferred route because it allowed FIIs to invest in individual stocks in excess of that permitted by the Indian law. PNs are freely transferable instruments. Since the owners' identity is not known, trading of these instruments is risky. PNs lack transparency of inflows. If these FIIs get registered then the source of capital inflows will be known. This step intends to regulate the capital flows.

Sub-accounts are the agents of registered FIIs to issue PNs. A sub-account generally is the underlying fund on whose behalf FIIs invest. They have to either wind up or apply to register themselves as proprietary or corporate sub-accounts.

12. In order to regulate the operation of PNs, the SEBI accepted the RBI's advice and came up with new proposals for PNs on October 2007. The SEBI proposed that FIIs could not issue or renew ODIs (Offshore Derivative Instruments) and had to wind up all the current positions within 18 months. If notional value of PNs outstanding as a percentage of their Assets Under Custody (AUC) in India is less than 40%, the FIIs can issue PNs at 5% annually on increment basis based on AUC. If it is more than 40%, they can issue after canceling or redeeming existing PNs. The FIIs have to report to the SEBI on monthly basis. For PN-holders who would like to register with the SEBI are unable to meet the eligibility criteria, the SEBI has come out with new 'broad-based' criteria, according to which, broad-based sub-accounts must have atleast 20 investors and they cannot have a single person holding over 49% of AUC.

[< TOP >](#)[< TOP OF THE DOCUMENT >](#)

* 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.