

Question Paper

Security Analysis ñ II (212) : April 2005

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

Read the case carefully and answer the following questions:

1. Perform Industry analysis of the Indian Textiles Industry in the wake of phasing out of quotas.
(10 marks) < [Answer](#) >
2. a. Perform SWOT analysis of Indian Rayon & Industries Ltd (IRIL).
b. Comment on the financial health of Indian Rayon & Industries Ltd (IRIL) based on the financial statements and ratios given in the Annexure- I.
(4 + 6 = 10 marks) < [Answer](#) >
3. From the data provided in Annexure- I, you are **required** to estimate the probability that the return from the stock of Indian Rayon & Industries Ltd (IRIL) would be between 0% and 40% during January –April 2005.
(7 marks) < [Answer](#) >
4. Using the information given in Annexure-I, you are **required** to
 - a. Estimate the regression equation (Security Market Line) depicting the relationship between beta and expected return.
 - b. Calculate required rate of return on the share of Indian Rayon & Industries Ltd (IRIL), using the relationship found in (a).
 - c. Calculate the perpetual dividend growth rate required by the Indian Rayon & Industries Ltd (IRIL) according to the dividend discount model to support its current stock price of Rs.310.85. Assume that dividend paid during the year 2004-05 was Rs.10.00 per share.(4 + 6 + 3 = 13 marks) < [Answer](#) >
5. Comment on whether the stock should be bought, sold or held at points A, B, C and D based on the share price charts given in Annexure II.
(10 marks) < [Answer](#) >

Indian Textiles Industry

Overview

India's Textile Industry is the second largest in the world, next only to China, with annual shipments of USD 20 billion and a work force of 20 million people. It generates 7% of India's GDP, 20% of its industrial output, and 38% of its export earnings. The competitive position of Indian Textiles largely reflects its vast domestic fiber base, huge low cost and skilled work force, established allied industries, significant yarn and fabric capacity; and manufacturing flexibility.

The Indian textile industry is pre-dominantly cotton based with 70 percent of the raw material consumed being cotton. It is composed of three major sectors, namely, the mill-made, also called the organized sector, the handloom and powerloom sectors both being classified as decentralized sectors and the hosiery and garment sector.

Cotton / Man-made Fibre Textile Mill Industry is the single largest organised industry in the country employing nearly 10 lakh workers. Besides, there are a large number of ancillary industries dependent on this sector such as those manufacturing various machineries, accessories, stores, ancillary and chemicals.

The Indian Textile Industry has recorded a significant growth during the last decade. The growth has been

entirely due to increase in spinning mills from 873 in 1993 to 1564 units in March 2004, with the spinning capacity in the organised sector increasing from 28 million spindles to 36 million spindles, registering an addition of 8 lakh spindles per annum. During 2003-2004 due to closure of 92 mills (34 spinning and 58 composite mills) the spindlage capacity has decreased to 34.02 million from 35.75 Mn. in 2001-02 the number of the rotors have decreased to 3.83 lakh from 4.09 lakh in 2001-02 and the loomage capacity has decreased to 0.88 lakh from 1.24 lakh in 2001-02.

**GROWTH IN CAPACITY IN THE ORGANISED MILL SECTOR
(Cotton man-made/fibre textile mills-Non-SSI)**

Year Ending	No of Mills		Total	Installed Capacity		
31/03/2002	1579	281	1860	35.75	409	123
31/03/2003	1599	276	1875	36.10	379	119
31/03/2004	1564	223	1787	34.02	383	88

As on 31.03.2004, there were 1787 Cotton/ Man -made- fibre textile mills out of which 1564 were spinning mills and 223 were composite mills with spindlage capacity of 34.02 million, rotors 0.38 million and loomage 0.08 million units.

The capacity utilization in the spinning sector of the organised textile mill industry ranged between 85% to 83% during 2000-2001 to 2003-04 while the capacity utilisation in the weaving sector of the organised textile mill industry ranged between 47% to 53% during 2001-2002 to 2003-04.

**CAPACITY UTILIZATION IN THE MILL SECTOR
(Cotton/Man-Made Fibre Textile Mills-Non-SSI & SSI)**

Year	Installed Spindles Nos. (in million)	Percentage Utilization	Installed Looms Nos. (in thousand)	Percentage Utilization
2001-01	37.91	85	123	47
2001-02	38.32	82	123	42
2002-03	39.03	80	119	41
2003-04	37.03	83	88	53

During 2003-04, 468 cotton/man-made fibre textile mills (374 spinning and 94 composite) with an installed capacity of 9.3 mn. spindles, 83 thousand rotors and 51.5 thousand looms were reported to be closed. The incidence of sickness and closure in the organised textile industry is a matter of concern. One main reason of sickness is structural transformation resulting in the composite units in the organised sector losing ground to powerlooms in the decentralized sector due to latter's greater cost effectiveness. The other causes of sickness/ closure of the industry include low productivity due to lack of modernisation, stagnation in demand and inability of some units to expand in the export market, increase in the cost of inputs, difficulties in getting timely and adequate working capital, etc.

CLOSURE OF COTTON / MAN-MADE FIBRE MILLS IN TEXTILE INDUSTRY

Year / Month End	No. of mills			Installed Capacity			Employees on roll ('000)
	Spg	Comp.	Total	Spindles	Rotors (No.)	Loans ('000)	
2001-01	262	121	383	8964	46012	690	344
2001-02	295	126	421	9459	59712	710	362
2002-03	349	134	483	10699	66936	741	390
2003-04(P)	374	94	468	9391	83000	515	329

The weaving capacity in the organised mill sector had been stagnant for a number of years. The production of cloth in the mill sector in 2003-2004 is provisionally estimated at 1433 mn. sq.mtrs. as compared to 1670 mn. sq. mtrs. in 2000-2001.

Production of Fabrics in different sectors

	Mill Sector		(Mn. Sq. Mtrs.)	
	2000-2001	2001-2002	2002-2003	2003-2004(P)
Cotton	1106	1036	1019	968
Blended	332	296	263	253
100% Non Cotton	232	214	214	212
Total	1670	1546	1496	1433

	Handloom Sector		(Mn. Sq. Mtrs.)	
	2000-2001	2001-2002	2002-2003	2003-2004(P)
Cotton	6577	6698	5098	4540
Blended	111	95	118	116
100% Non Cotton	818	792	764	862
Total	7506	7585	5980	5518

	Decentralized Powerloom Sector		(Mn. Sq. Mtrs.)	
	2000-2001	2001-2002	2002-2003	2003-2004(P)
Cotton	6584	6473	6761	6378
Blended	5071	5025	4695	4700
100% Non Cotton	12148	13694	14498	16180
Total	23803	25192	25954	27258

	All Sectors		(Mn. Sq. Mtrs.)	
	2000-2001	2001-2002	2002-2003	2003-2004(P)
Cotton	19718	19769	19300	18062
Blended	6351	6287	5876	6077
100% Non Cotton	13606	15334	16135	17907
Total	39675	41390	41311	42046
Khadi, Wool & Silk	558	644	662	662
Grand Total	40233	42034	41973	42708

Recent Trends

A recent WTO report has predicted major gains for textile manufacturers from India and China following the phase-out of quotas from January 1, 2004. However, lack of economies of scale, high raw material costs and higher outgo on power have largely ensured that Indian textile players produce a number of inputs — yarn and fabric — at a higher cost as compared to China and Brazil.

According to international production cost comparisons on 13 major yarn and fabric categories compiled by the International Textile Manufacturers Federation (ITMF), the cost of an overwhelming 10 input items is lower in China and Brazil. For instance, the average cost of production of one kilogram of textured yarn in India during 2003-04 was \$2.06, as against a production cost of \$1.40 in China, \$1.68 in South Korea and \$1.90 in Brazil.

Being cost competitive is important since with the last set of quotas being abolished from 2005, 49 per cent of the trade is going to be freed. According to estimates, almost all the categories that have gone off quotas have witnessed a fall in sourcing prices by 10-20 per cent within the first year itself. Many of the organised Indian textile players have production costs comparable to their Chinese counterparts. Much of the Indian textile industry is, however, disorganized and hence the overall costs competitiveness of the industry comes down in comparison to the much more organized industries in China and other countries.

In terms of labour costs, however, India clearly has an edge and the outgo on labour here compares favourably with other countries.

In the case of manmade yarn and fibre sector, India is less cost competitive due to the regressive tax structure of the Government. Consequently, textured yarn and fabrics cost much higher to produce here. Higher capital costs

could be another worrying factor for Indian manufacturers.

Textile production Competitiveness of various Countries

Item	India	Brazil	China	S. Korea	USA
Textured yarn*	2.06	1.90	1.40	1.68	2.13
O-E Yarn*	2.17	2.31	2.51	2.35	2.30
Ring Yarn*	2.45	2.61	2.76	2.68	2.86
Weaving Ring O-E Yarn**	0.24	0.20	0.22	0.29	0.34
Woven ring yarn fabric**	0.633	0.652	0.691	0.754	0.844
Woven O-E yarn fabric**	0.614	0.600	0.647	0.696	0.746
Ring Yarn Knitting**	0.12	0.14	0.08	0.12	0.19
Knitted Ring yarn fabric**	1.118	1.208	1.209	1.222	1.366
O-E Yarn knitting**	0.06	0.07	0.04	0.06	0.10
Textured yarn knitting**	0.39	0.37	0.37	0.39	0.71
Woven textured fabric**	0.591	0.548	0.506	0.551	0.920
Textured yarn knitting**	0.05	0.06	0.04	0.05	0.08
Knitted textured yarn fabric**	0.205	0.201	0.139	0.177	0.242

* Total yarn cost (in \$ per kg of yarn)

** Total fabric cost (in \$ per yard of fabric)

Indian Rayon and Industries Limited (IRIL)

Indian Rayon and Industries Limited is a Rs1600 Cr. multi-product and multi-locational industrial conglomerate, a part of Aditya Birla Group, the organization of a long, illustrious and magnificent legacy spread over a period of 125 years. The Group is consolidating its position under the chairmanship of Shri Kumar Manglam Birla taking the aspirations from the legacy of a leading industrialist, Late Shri Aditya Vikram Birla. The organization came on the sphere of Rayon Industry in 1963 when its foundation stone was laid down by Late Shri Lal Bahadur Shastri.

This organization was started by Shri Morarji Vaidya of Vaidya Group with production capacity of 4MT per day in collaboration from Von-Kohom International of USA. In 1966 it was taken over by Shri Aditya Vikram Birla and since then has been a part of the AV Birla combine.

The Rayon Division is one of the 12 Divisions of Indian Rayon, located in Veraval, Gujarat. The main product of the Rayon Division is the Viscose Filament Yarn apart from chemicals like sulphuric Acid, Carbon-di-sulphide, which are both consumed in-house and Sodium Sulphate, which is a by-product. The total production is 38.5 TPD of yarn likely to be increased to 40 TPD by June 1998. Rayon industry consists of seven domestic players, and IRIL is the market leader in terms of sales. Exports constitute about 15% of the total turnover.

Most of the sale of yarn has been through dealers and agencies. The major market for the Viscose Filament Yarn is Surat. The other major centres are in Mumbai, Ahmedabad, Salem, Bangalore, Amritsar etc. The main competitors are Century Rayon, Baroda Rayon and National Rayon. IRIL has stakes in JVs like Indo Gulf Corporation Ltd., Mangalore Refinery & Petrochemicals Ltd., Birla AT&T Communications Ltd. etc. A Rs.1.3-bn, 35000-tpa carbon black plant was commissioned near Chennai in September 1998. The Renukoot carbon black plant is the first one in the country to receive the QS 9000. On September 1, 1998, IRIL demerged its cement business to Grasim Industries Ltd. (GIL). In return, GIL issued 3 equity shares for every 10 held by IRIL shareholders.

The company entered the retail garment segment by acquiring Madura Garments, the readymade garment division of Madura Coats Ltd.

Recent Developments

Indian Rayon & Industries Ltd has informed that pursuant to acquisition of equity share capital of Transwork Information Services Pvt Ltd (TISPL), the company has become a wholly owned subsidiary of Indian Rayon & Industries Ltd. TISPL has two subsidiaries, Transwork IT Services India Pvt Ltd, Bangalore and Transwork Inc (a Delaware Corporation) which have also become subsidiaries of Indian Rayon & Industries Ltd. The company has announced its entry into BPO sector with the acquisition of M/s Trans Works Information Services pvt ltd.

IRIL has also launched its insulator Joint venture with Japan based NGK Insulator Ltd, and the JV is named as Birla NGK Insulators Private Ltd.

IRIL is all set for a major spread of its carbon black, insulators and viscose filament yarn businesses. Hi-Tech

Carbon, a unit of Indian Rayon Industries Ltd of Aditya Birla group has decided to double its carbon black manufacturing capacity at its plant at Gummidipondi in Tamil Nadu.

Annexure - I
Financial Statements of Indian Rayon & Industries Ltd. (IRIL)

	2004	2003	2002	2001	2000
Income:					
Operating Income	15,738.40	14,438.20	14,081.60	14,161.90	10,719.00
Expenses					
Material Consumed	8,331.00	7,302.10	7,298.50	7,264.40	5,600.90
Manufacturing Expenses	1,701.20	1,553.80	1,720.60	1,717.90	1,291.00
Personnel Expenses	1,178.10	1,231.20	1,197.40	1,185.10	1,082.40
Selling Expenses	1,492.30	1,441.60	1,595.60	1,529.40	712.30
Administrative Expenses	645.30	646.00	582.20	614.10	488.80
Expenses Capitalised	0.00	0.00	0.00	0.00	0.00
Cost Of Sales	13,347.90	12,174.70	12,394.30	12,310.90	9,175.40
Operating Profit	2,390.50	2,263.50	1,687.30	1,851.00	1,543.60
Other Recurring Income	222.50	313.00	265.20	391.80	386.80
PBDIT	2,613.00	2,576.50	1,952.50	2,242.80	1,930.40
Interest Expenses	239.90	436.60	622.90	875.90	752.30
Depreciation	775.90	678.10	696.10	691.50	715.20
Other Write offs	39.30	39.30	39.30	39.30	9.80
PBT	1,557.90	1,422.50	594.20	636.10	453.10
Tax Charges	501.50	342.20	306.10	56.50	0.00
Non Recurring Items	209.80	-163.70	74.90	33.80	-2,890.00
Other Non Cash adjustments	46.60	136.70	71.60	71.80	24.60
PAT	1,312.80	1,053.30	434.60	685.20	-2,412.30
Earnings Before Appropriation	3,409.20	1,850.10	1,009.80	990.70	339.10
Appropriations					
Equity Dividend	239.50	224.50	197.60	179.60	59.90
Preference Dividend	0.00	0.00	0.00	0.00	0.00
Retained Earnings	3,139.00	1,596.80	812.20	792.80	405.6
Balance Sheet					

Less : Accumulated Depreciation	5,885.30	5,015.50	4,913.00	4,380.10	3,711.50
Net Block	7,127.80	6,759.90	7,508.40	7,933.10	8,282.70
Capital Work-in-progress	246.90	80.90	109.20	10.70	145.30
Investments	7,416.30	5,143.00	4,397.90	3,438.20	3,441.60
Net Current Assets					
Current Assets, Loans & Advances	5,700.90	5,837.90	6,466.40	6,324.30	6,565.40
Less : Current Liabilities & Provisions	3,786.50	3,503.60	3,090.80	1,747.50	1,720.60
Total Net Current Assets	1,914.40	2,334.30	3,375.60	4,576.80	4,844.80
Miscellaneous expenses not written	29.50	68.80	108.10	147.40	186.70
Total	16,734.90	14,386.90	15,499.20	16,106.20	16,901.10

Financial Ratios**

	2004	2003	2002	2001	2000
Profitability ratios					
Operating Margin (%)	15.18	15.67	11.98	13.07	14.40
Gross Profit Margin (%)	10.25	10.98	7.03	8.18	7.72
Net Profit Margin (%)	8.22	7.14	3.02	4.70	-21.72
Return On Net Worth (%)	10.38	9.04	4.02	6.07	-22.43
Return On long Term Funds (%)	10.74	12.92	8.86	10.35	7.78
Leverage ratios					
Long Term Debt / Equity	0.32	0.22	0.25	0.27	0.41
Total Debt/Equity	0.32	0.22	0.42	0.40	0.54
Owners fund as % of total Source	75.75	81.37	70.37	70.94	64.72
Liquidity ratios					
Current Ratio	1.51	1.67	2.09	3.62	3.82
Quick Ratio	0.77	0.96	1.23	2.04	2.27
Inventory Turnover Ratio	6.56	7.06	6.46	6.04	5.03

**Note: All balance sheet figures are average of two years and profit and loss figures are annualised

Beta Vs. Expected Return

Beta	Expected Return (%)
0.25	7.50
0.50	9.00
0.75	10.00
1.25	17.50
1.30	18.20
1.50	21.00
1.60	22.50
1.75	24.50

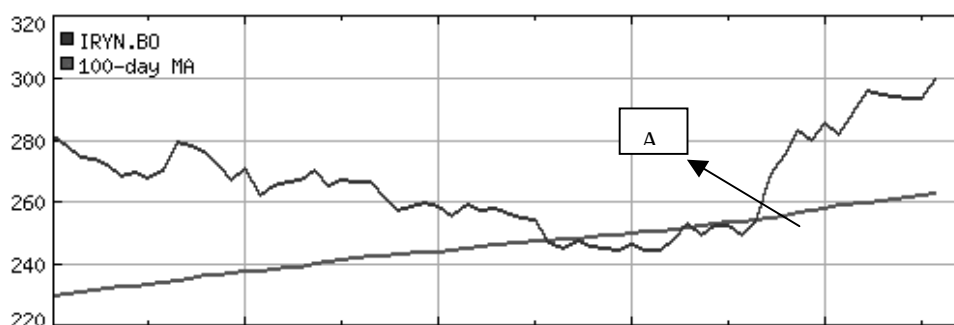
Movement of Stock Price and the Market Index

Date	Stock price of IRIL (Rs.)	S&P CNX 500
January 01, 2002	70.65	1055.30
June 28, 2002	99.60	1057.80
January 01, 2003	93.15	1100.15
June 30, 2003	130.65	1134.15
January 01, 2004	270.00	1912.25
June 30, 2004	203.85	1505.60
January 01, 2005	290.00	1980.00

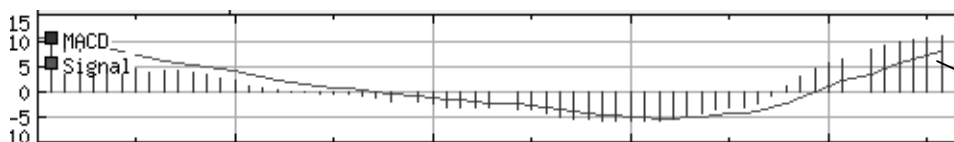
Annexure II

Technical Analysis Charts of Indian Rayon and Industries Ltd.

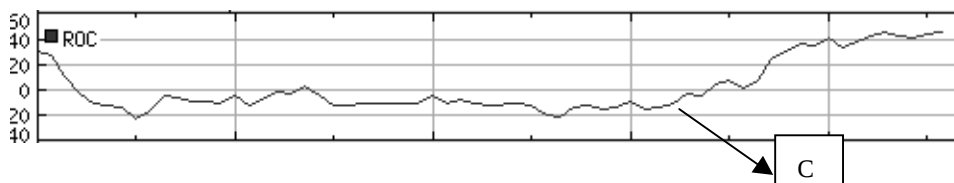
100 Day Moving Average Chart



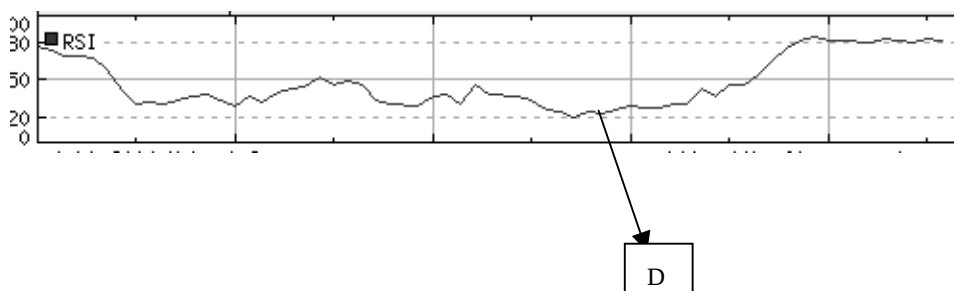
MACD Chart



ROC Chart



RSI Chart



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. The caselet mentions that SEBI proposes to revive trading in illiquid stocks through 'Call Auction'. What is 'Call Auction Market'? Discuss.

(7 marks) < [Answer](#) >

7. The caselet mentions that critics are of the opinion that a call auction market design may not be of much help. SEBI would do well to leave trading in such stocks to market forces. Do you agree? Discuss.

(10 marks) < [Answer](#) >

The primary objective of the secondary market is to provide liquidity to the stocks and enable a holder to easily convert the securities into cash. But when a large number of listed stocks in a stock exchange are illiquid, the very purpose of the secondary market seems defeated. In the Indian stock exchanges, out of the 7,000 listed stocks, as many as 4,000 are thinly traded or lack liquidity. The recent figures indicate that between March 31, 1996 and March 31, 2003, the number of illiquid scrips rose by 34%. For the same period, the number of scrips traded has fallen to 2,283 from about 3,443. Some other facts worth mentioning are that 8.8% of companies listed on the BSE traded for less than 10 days during 2002-03, while 32.3% of the stocks were traded for less than 100 days. The whole period of rise in illiquid stocks over the past few years has put pressure on the Securities and Exchange Board of India (SEBI) to take measures to put liquidity back into these stocks.

The rationale behind why these stocks are thinly traded could be due to the high promoters' holding leading to low floating stock. The ownership structure does matter since most of these companies have high stakes of insiders, government bodies and financial institutions, which have a toxic effect on the liquidity. The reason why many scrips in the B1 and B2 category at BSE do not attract investor attention is the perception of the buyer that the prices tend to be managed by the insiders rather than discovered.

There are tax benefits that can be availed by getting listed on stock exchanges like listed companies have to pay taxes at lower rates than non-listed companies. As a result of which many stocks got listed on BSE even though the outsiders' stakes are low. This leads to lack of adequate market information on these companies, which drives the investors to known stocks. Prof. G Sethu, Faculty, UTI Institute of Capital Markets, Mumbai, opines, "The investors are not getting adequate information about small companies to make investment decisions. Besides, small companies are less resilient in terms of withstanding business cycles and are, therefore, risky. There is no clear data to show that these small companies offer returns commensurate with their risk."

Apart from that stringent regulatory norms followed by economic liberalization, low market returns (for listed companies based on cost-benefit analysis for being listed), recession in the economy and global distressed scenario because of terrorism, accounting frauds, IT crash, and domestic downturns due to capital market scams (like that of Ketan Parekh), issues of national security (attack on Parliament) and elections (political uncertainty) and reducing investors' and participant confidence in the markets are also reasons for the high number of illiquid stocks.

The accumulation of illiquid stocks in the lists of BSE and RSEs (Regional Stock Exchanges) can be also explained as a historical development. The BSE and RSEs, which together controlled the market in the past, did not develop investor-based active trading in the spot (cash) market. At this point it is debatable whether illiquid stocks acted as a burden on the stock exchanges and resulted in bringing down their business or is it the failure of the stock exchange that resulted in the stocks not being traded adequately and hence turned illiquid.

SEBI proposes to revive trading in illiquid stocks. At present, there are about 5,000 such stocks on the Bombay Stock Exchange (BSE). The capital market regulator proposes to use call auction design for the purpose. The Over the Counter Exchange of India (OTCEI) will introduce a separate market called the Call Auction Market (CAM) along with the normal trading market. It will provide a trading platform for the investors and brokers of the exchange to trade in illiquid stocks. The CAM is different from the continuous market mechanism in many ways. In the sense that CAM will be on illiquid stocks and will have a huge potential for an upside while OTCEI only works with currently liquid stocks and hence cannot be used for the illiquid stocks.

Will the CAM be successful in bringing in liquidity into the market or will it just work out as an exit route for the existing investors of these illiquid stocks? Critics are of the opinion that such a market design may not be of much help. SEBI would do well to leave trading in such stocks to market forces.

Caselet 2

Read the caselet carefully and answer the following questions:

8. The caselet mentions that it is both ironic and predictable that even after a decade of reforms the retail participation is not significant in Indian stock markets. What is 'ironic' and 'predictable' about this? Discuss.

(8 marks) < [Answer](#) >

9. The caselet mentions that there may be millions of retail investors in India, but the truth is they haven't got that much money in the market; so India isn't exactly the home of the "equity cult". What according to you are the reasons for this state of affairs? Discuss.

(8 marks) < [Answer](#) >

The bars and restaurants in downtown Mumbai are once more full of noisy people having a good time because the Sensex makes them feel rich again. Without wanting to be a party-pooper, this is a good time to ask how Indian the stock market is, and how much of a role the "small investor" plays in this market. In other words, is this a playground for the few or a market for the many?

In theory, there is mass participation, since companies like Reliance Industries count their shareholders in millions. But when you look at the hard money, the numbers tell a different story. Even in Reliance, the promoters hold 47 per cent of the company; foreign institutional investors and GDRs account for a further 28 per cent, and some of the rest is held by the Indian financial institutions. The general public holds (directly and through mutual funds) not more than 15 per cent or thereabouts. And this is the company whose founder is credited with a seminal role in spreading the equity cult in the country.

Two other points are worth registering. The market capitalisation of India's stock market, at roughly Rs 15,00,000 crore, is about half of India's GDP. That ratio in most other emerging markets of any consequence is much greater. This means the stock market is not as important in India as its counterparts are in other countries. Second, the average Indian puts a miserable 1.5 per cent of his savings in stocks and shares (and equity mutual funds). Not only is that figure unusually low by the normal international yardsticks, it is also much lower than it used to be (more than 5 per cent). Clearly, successive scams and boom-bust cycles have made man in the street wary of mucking around in the middle of rampaging bulls and bears. After a decade of reforms, this is both ironic and predictable.

Mutual funds are the natural alternative for retail investors who have burnt their fingers as a result of successive scams (Harshad Mehta, Ketan Parekh) or don't trust their own judgment in volatile situations. But trust in fund managers isn't too high, either—because of the experience with the UTI and the general perception that many fund managers often don't manage to beat the index. The result is a lack of faith in the market.

Changes in the primary market have reinforced these trends. Public share issues are increasingly "book-built" affairs that give a huge advantage to institutional players (who, unlike retail buyers, can book shares without paying any money up front). And the old rules that led to under-priced offerings that left more on the table for the buyer, disappeared long ago. Shareholding patterns in the large companies reflect these trends. Thus, foreign investors now own 69 per cent of ICICI, 62 per cent of HDFC, 65 per cent of Satyam, and 48 per cent of Infosys.

In many other companies of comparable scale, they hold between 30 per cent and 40 per cent. If you take away the foreign and promoter holdings in the 10 companies with the biggest valuations (which account for a third of the value of all listed shares), you discover that domestic non-promoter investors (including the financial institutions and mutual funds) hold not more than 25 per cent of the total stock in these companies. FIIs and GDRs accounted for slightly more than that number.

In other words, the Reliance picture is pretty representative of large-cap stocks. There may be millions of retail investors in India, but the truth is they haven't got that much money in the market; so India isn't exactly the home of the "equity cult".

Caselet 3

Read the caselet carefully and answer the following questions:

10. The caselet mentions that there have been ‘good’ reasons for prices of riskier corporate bonds to climb compared with those of Treasuries. What according to you are the reasons for this anomaly? Discuss.
- (9 marks) < [Answer](#) >
11. The caselet mentions that spreads are a poor guide to value, especially when yields are low. Comment.

(8 marks) < [Answer](#) >

There are, possibly, worse investments but, Nigerian scams aside, it is hard to think of a surer way to lose money than buying lowly-rated bonds issued by American companies at their present niggardly yields. In March 2004, Warren Buffett dismissed the junk-bond market as weeds priced as flowers. Today, they are priced more like exotic orchids—or, dare one say it, Dutch tulip bulbs in the 17th century.

While many other markets wobbled in October 2004, prices of junk bonds soared. Spreads over Treasury bonds fell by 40 bps (basis points, or hundredths of a percentage point) in the last week of the month alone. So far this year, high-yield bonds have returned more than 8%. And the weediest credits have turned in the strongest performance: those with a CCC rating, (almost the lowest awarded to companies that are not in default) have soared.

To be sure, there have been ‘good’ reasons for prices of riskier corporate bonds to climb compared with those of Treasuries.

As S&P points out, when issuance by companies rated B- or lower accounts for more than 30% of the total issuance of all junk bonds (defined as those with a rating lower than BBB-) for a sustained period, this serves as a warning of a pick-up in defaults two years or so down the road. And the share of issuance by companies with a rating of B- or lower has exceeded 40% in the first three quarters of this year. Some 12% of these firms carried a CCC rating.

Over the long term, a bit more than 13% of issuers rated B- will default within a year; for those with a CCC rating the figure is just over 30%. Within five years, the numbers rise to 39% and 53% respectively. So far this year, 85% of junk issues have had maturities of seven years or longer.

For such bonds, investors have been requiring ever-lower yields. The spread of bonds rated B, for example, has collapsed from 500 bps a year ago, to 375 bps. “We’re really at a point now where the risks are outweighing the rewards,” says Diane Vazza, of S&P’s fixed-income research department, with some understatement. For dodgy credits, in any case, spreads are a poor guide to value, especially when yields are low. Alas, the investors are likely to find this out, as they have in the past, the hard way.

END OF SECTION E

END OF QUESTION PAPER

Suggested Answers

Security Analysis ñ II (212) : April 2005

Section D : Case Study

1. The Indian Textile Industry is likely to face a very challenging time with the phasing out of quotas. Quota phase-out will not automatically translate into an immediate volume and value increase.

The main reason for India's compromised competitive situation post-multi-fibre arrangement (MFA) is government policies in the past two decades, which have "systematically destroyed the core of this industry" and have resulted in the peculiar structure of the Indian textile and clothing industry. In fiscal year 2002-03, the organized textile makers produced just about 3.6 percent of all fabric production in India (and about 5.5 percent in terms of value) while the remaining came from the unorganized manufacturing sector that mostly use backdated power-operated weaving machines (called powerlooms) or just manually operated ones (handlooms).

On the revenue side too, the industry structure is highly skewed. Excluding the output of leading producers (such as Reliance Ind, Indorama and Grasim), the total revenues of the top 20 textiles and clothing companies in India do not exceed \$2 billion. There are no more than 15 apparel exporters in the country that have revenues in excess of \$22 million; another 30 between \$1 million and \$22 million; while none of the numerous rest even touch the million-dollar mark.

Industry players feel that because of the lopsided government policies of yesteryears, investment in new capacity, crucial for the country's textile sector to take advantage of the post-quota regime, has almost come to a halt in the past five years. The total new investment in the Indian textile and clothing sector, including some modernization in the past five years, has been about \$2 billion: which is insignificant for an industry that, requires more than \$21 billion over the next three to five years to be competitive and on an industry-matching global scale. Moreover, the sector has received practically no foreign direct investment and there are no signs of this trend reversing any time in the near future.

Amid a world of rapid consolidation of brands and retailers, which require larger suppliers, India's exports potential remains a suspect since the strength of even the biggest of Indian companies (barring a few) to scale up to global size is untested.

Once the free-trade regime sets in and all country quotas are abolished, the cheaper stuff from Malaysia, Bangladesh and China will pose further problems. The maximum threat to the industry is from China.

Indeed, China's impact is already being felt. Its clothing exports have grown to about a quarter of the world total since it joined the World Trade Organization in 2001. Some industry experts forecast that share will double in less than five years.

Many Indian garment exporters fear that China could grab a big bite from India's share too in the post quota regime. Both countries have abundant raw materials, cheap labor and entrepreneurial skills. But for buyers looking for large runs and economies of scale, China's huge factories and low-cost production are unmatched. China might well become the monopoly, if Indian textile industry doesn't ramp up speedily.

The post-quota regime jitters are already being felt acute in some cases though. Unable to cope with the stringent compliance norms being laid down by global buyers or the heavy investments for large-scale plants, more than 500 small exporting outfits have already downed shutters.

Global buyers including JC Penney, Target and Wal-Mart are reportedly enforcing strict compliance for areas like social audits and so on, ahead of the textile quota phase-out in January '05, while at the same time bargaining for pushing prices down.

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2. a. SWOT Analysis of Indian Rayon & Industries Limited:

Strengths

- i. It is a part of the Aditya Birla Group, which is a organization with a long, illustrious and magnificent history. It is further consolidating its position under the chairmanship of Kumar Managalam Birla.
- ii. IRIL is the market leader in the Indian Rayon Indsutry.
- iii. Its operations are spread outside India also. Exports constitute 15% of the total turnover.
- iv. Its carbon black plant in Renukoot is the first one in the country to receive a quality certification QS 9000.

- v. It has also entered the retail segment by acquiring the Madura Garments, the readymade garment division of Madura Coats Ltd. This acquisition brought into IRILs fold major apparel brands like Louis Philippe, Van Heusen, Allen Solley, Peter England etc. The company has a 30 percent market share in the 12 billion rupees branded mens wear sector.
- vi. Easy Availability of raw material and Low cost skilled labor
- vii. Growing domestic market.

Weaknesses

- i. Fragmented Industry.
- ii. Effect of historical government policies.
- iii. Relatively high cost of production vis-à-vis the production cost in other countries like China.
- iv. High rate of technological obsolescence in the industry.

Opportunities

- i. From 2005 onwards the global trade is expected to triple from the present levels. This presents an opportunity in itself. The need is to tap the opportunity.
- ii. There is a need to increase product development – newer specialized fabrics, faster turnaround time for design samples, investing in design centers and sampling labs.
- iii. Increased use of CAD to develop designing capability.
- iv. Investing in trend forecasting.

Threats

- i. Competition from cheaper imports.
 - ii. Increased regional consolidation through alliances, mergers and acquisitions.
 - iii. Increased pressure to follow international labor and environmental laws.
 - iv. Increased consumer awareness about issues like usage of polluting dyes, child labor, unhealthy working conditions, etc.
- b. i. Profitability of the company is showing fluctuating trend as represented by various profitability ratios. The operating profit margin increased in 2003 but declined again in 2004. Similarly, the gross profit margin after declining in 2002, increased again in 2003 but declined in 2004. However, the net profit margin has shown an increasing trend since 2002. The return on net worth has also shown an increasing trend since 2002. however, the return on long term funds has shown a fluctuating trend.
- ii. The company has increasingly made use of own funds since 2000 till 2003 which is reflected in the long term debt to equity ratio. However, the debt equity ratio increased in 2004 suggesting that company borrowed significantly during the FY 2004.
- iii. Current ratio of the company has also declined to almost 50% of what it was in the year 2000. The quick ratio of the company is also showing a declining trend. This indicates the decline in the liquidity position of the company. The inventory turnover ratio has also declined in 2004, which is a cause of concern. It may further deteriorate the liquidity position of the company.

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3.

Return on stock of IRIL (%)	Return on S& P CNX 500 (%)
40.98	0.24
-6.48	4.00
40.26	3.09
106.66	68.61
-24.50	-21.27
42.26	31.51

Mean return on the stock = 33.20%

The standard deviation of the return of IRIL stock = 45.81 %

Probability that the return will be between zero and 40% can be calculated as follows:

$$\frac{0 - (33.20)}{45.81} < Z < \frac{40 - (33.20)}{45.81}$$

$$\frac{-33.20}{45.81} < Z < \frac{6.8}{45.81}$$

$$\text{or } -0.7247 < Z < 0.1484$$

From the normal distribution table, the area for

$$-0.7247 \rightarrow 0.2657$$

$$0.1484 \rightarrow 0.5590$$

$$Z = 0.5590 - 0.2657 = 0.2933 = 29.33\%$$

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4. a. The equation for SML can be derived by running a regression between the beta values given and the corresponding return:

X	Y	X ²	XY
0.25	7.5	0.0625	1.875
0.5	9	0.25	4.5
0.75	10	0.5625	7.5
1.25	17.5	1.5625	21.875
1.3	18.2	1.69	23.66
1.5	21	2.25	31.5
1.6	22.5	2.56	36
1.75	24.5	3.0625	42.875
8.9	130.2	12	169.785

$$\sum X = 8.90, \sum Y = 130.20, n = 8$$

$$\sum XY = 169.785, \sum X^2 = 12$$

$$\bar{X} = 1.1125, \bar{Y} = 16.275$$

$$\text{The coefficient of regression (Slope) } b = \frac{\sum XY - n\bar{X}\bar{Y}}{\sum X^2 - n\bar{X}^2} = \frac{169.785 - 8 \times 1.1125 \times 16.275}{12 - 8 \times (1.1125)^2} = 24.9375 / 2.09875 = 11.88$$

$$\text{The Y intercept } a = \bar{Y} - b\bar{X} = 16.275 - 11.88 \times 1.1125 = 3.0585$$

$$\text{Value of } a = R_f = 3.0585$$

$$\text{Value of } b = R_m - R_f = 11.88$$

$$\text{The equation is } 3.0585 + 11.88\beta$$

Where β is the beta of the stock.

- b. The beta of IRIL can be determined based on the returns from the stock and the returns on the index.

Y	X	X ²	XY
40.98	0.24	0.06	9.71
-6.48	4.00	16.03	-25.94
40.26	3.09	9.55	124.42
106.66	68.61	4706.84	7317.56
-24.50	-21.27	452.22	521.01
42.26	31.51	992.82	1331.57

$$\Sigma Y = 199.18, \Sigma X = 86.18 \quad n = 6$$

$$\Sigma XY = 9278.33, \Sigma X^2 = 6177.52$$

$$\bar{X} = 14.36, \bar{Y} = 33.20$$

$$\text{The coefficient of regression (Slope) Beta} = \frac{\Sigma XY - n\bar{X}\bar{Y}}{\Sigma X^2 - n\bar{X}^2} = \frac{9278.33 - 6 \times 14.36 \times 33.20}{6177.52 - 6 \times (14.36)^2}$$

$$= 6417.82/4940.26 = 1.299$$

$$\text{Beta} = 1.299$$

$$\text{Beta of IRIL} = 1.299$$

$$\text{Expected return from IRIL} = 3.0585 + 1.299 \times 11.88 = 18.4906\%$$

c. According to DDM,

$$P_0 = \frac{D_1}{k - g} \quad \text{or} \quad 310.85 = \frac{10.0 \times (1 + x)}{0.1849 - x}$$

$$310.85 \times 0.1849 - 310.85x = 10 + 10x$$

$$57.48 - 10.0 = 310.85x + 10x$$

$$\frac{47.48}{x} =$$

$$320.85 = 14.798\%.$$

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5. A. At this point both moving average and price line have started rising hence it is an indication to buy the stock.
- B. At this point MACD line is well above its reference line and about to decline therefore stock should be sold.
- C. As ROC line has started moving up it is an indication to buy the stock.
- D. RSI has touched the oversold position and price rise is expected, it is an indication to buy the stock.

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Section E: Caselets

Caselet 1

6. The orders are collected over a time interval and bunched and there is no concept of bid-ask-spread. The clearing price of a call auction is based on full set of orders and is determined via consensus. In contrast, the price in a continuous market is determined whenever a transaction to buy and sell is made and the orders are met. The order book in CAM will remain open for a longer period for buyers and sellers to give their quotes, in order to match demand and supply for these illiquid stocks. Even the settlement period will be longer than the regular T+3 days.

The large number of stocks that are illiquid are segmented into a separate category and the order starts getting executed in a specific allotted time. The market remains open from 10 a.m. to 3 p.m. for placing the orders, while the price discovery takes place after 3.30 p.m. In case the participants want to change their orders they can do so in the allotted time between 10 a.m. and 3 p.m. After 3:30 p.m., the entire matchmaking process gets executed in a few minutes.

In such an auction design, the price is fixed at a level where the total demand for a stock is equal to its total supply. Suppose 10 buyers place an order to buy 10,000 shares of a particular stock at Rs 20. Assume that there are 15 sellers wanting to sell 12,000 shares at Rs 25. The price cannot be fixed because the sellers' price does not match that of the buyers'.

The broker or the auctioneer has to propose another price. Suppose the price is increased to Rs 22, at which level there are 7,000 buyers and 7,000 sellers for the stock. Because demand is equal to supply, the price will be fixed at Rs 22. Notice that this auction design is a time-consuming process because demand has to be matched with supply for a particular price. It for this reason that call auction was substituted with the continuous auction design that most stock markets now follow.

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7. Call auction design does not lend itself to active trading in stocks. Besides, the presence of day traders, who contribute largely to the daily trading volumes, makes it necessary for the market to have a continuous auction design.

The following reasons may frustrate SEBI in its attempt to revive trading in illiquid stocks:

Active market: Investors prefer buying stocks that are active. The reason is that active stocks typically lead to volatile movements. And volatility provides scope for good returns. When prices are "fixed" once or twice a day for each stock through call auction design, scope for intra-day trading virtually ceases to exist. This removes the day traders, a large class of investors, from the market.

The upshot is that the quantity demanded and supplied on a daily basis in each of the stock will be low. The reason is that only investors with a longer time horizon are bound to trade in such stocks. But if all or most of the investors have a longer time horizon, trading in the near term may not take place daily. That leaves limited scope for investors to exit for liquidity reasons. Hence, few investors may actually want to trade in such stocks in the first place.

Moreover, a call auction design does not help in the price discovery process. This is because information arrives in the market on a continual basis while the price for each stock is "fixed" at certain times during the day. Note that information could be stock-specific, sector-specific or factors that affect the market as a whole.

Market making: The situation would be no different if were to adopt a market-making design as was adopted by the Over the Counter Exchange of India (OTCEI). A market maker or a specialist provides buy-sell quotes at all time during trading hours. A person may be market maker for one or more stock. Because illiquid stocks are inherently risky, few brokers may be willing to become market makers. And even if they do, such market makers may choose to buy at a low price and sell at a high price. Such a high bid-ask spread would itself thwart active trading in such stocks.

Market forces: Transporting a call auction or a market making design for trading in illiquid stocks may not help. In fact, no market design is likely to revive trading in such stocks. The reason is that there is nothing wrong in the current market design. Investors buy and sell shares because they want to profit from such transactions. That they prefer to buy only the 2,000 active stocks in the market means that they do not consider the rest of the stocks worth investing. For, some of these companies do not exist and most of them are not performing well enough to warrant an investment.

If these companies were to report a turnaround in performance, investors are likely to demand their shares. Supply will automatically come from traders who hold these shares. In other words, market forces will ensure active trading in these illiquid stocks. Till then, merely changing the auction design is unlikely to tempt investors to trade in such stocks.

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Caselet 2

8. Ironical, because the fact is that the Indian stock market has got much fairer for retail investors; there is greater transparency and disclosure, brokers can't rig the market as easily as they used to, and the market is much more efficient in the way it handles transactions. But predictable too, because it is the FIIs who tend to move quickly when the mood in the market changes, and either ride the boom or leave the market when it is into a downturn. Indeed, FII moves virtually determine whether the market is going to go up or down. In contrast, your retail investor (as happens elsewhere in the world) gets into a bull market too late to enjoy its benefits, and gets out of the market too long after the bears have taken charge.

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9. The declining participation of small investors has more to do with investor unfriendly policies. It appears as if the policy framework has been designed to favor big/institutional investors. The following points indicate that policy bias which has resulted in the present state of affairs in the Indian stock market:
 - i. The increasing importance of FIIs in the market has converted the markets into a kind of casino and retail investors who lack the financial muscle cannot just dare to enter it.
 - ii. The retail investors are shying away from the stock markets because of unscrupulous ways of the promoters and brokers. There is a drop in the number of equity shares owned by the public in major

companies.

- iii. The demat system has not made much progress in terms of coverage of retail investors, majority of whom have stayed out of the demat system. The demat charges turn out to be very high for the retail investors. Even if the company may not pay any dividend, the custodial charges are to be paid to the depository participant. In addition, the depository participant often levy additional charges in the form of courier expenses, etc. which further increases the cost.
- iv. In the primary market also, the retail participation is only marginal. During 1998-2003, an amount of approximately Rs 50,000 crores has been raised through public offers of capital. Of the total amount, a meager 5 percent or Rs 2500 crores was offered to small investors. The corresponding figure in the case of book building IPOs was only 3 percent. During 1998-2003 while only 10% of the total issues were through the book-building route, they accounted for 53% of the total resources mobilized through public issues. According to RBI statistics the household sector's investment in shares and debentures continues to be negligible at just 0.3% of GDP and 2.4% of the financial assets.
- v. Though margin trading has been introduced, most of the issues being floated these days are at a premium. Thus, the margin money itself works out to quite a big sum which retail investors may not be able to invest.
- vi. Secondary markets have become highly volatile due to increased FII participation which further increases the risk. Retail shareholders are not even sure whether they are going to get their investment back let alone earn some return.

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Caselet 3

10. The reasons why the prices of riskier corporate bonds have increased compared with those of Treasuries are:
- i. Increasing profits have gone some way to improve the balance sheets of these companies. The proportion of companies with a "speculative grade" (junk) rating by Standard & Poor's, a big rating agency, that are defaulting has fallen from a peak of 10.5% in March 2002 to 2.3% last month, the lowest since 1998. And although S&P is still downgrading more companies than it is upgrading, the gap is shrinking.
 - ii. Increased risk appetite of investors. A hunger for anything with a sniff of yield attracts the investors and they do not worry much about the underlying risks.
 - iii. It is a self-feeding mechanism – investors are buying more of junk bonds than the government Treasuries and hence the increasing demand for junk bonds is fuelling the prices of junk bonds.
 - iv. This is also due to huge amounts of funds flowing to junk funds – mutual funds which specialize in investing in junk bonds. Since the high-yield market is fairly illiquid, similar to that for small-cap stocks, steep inflows to junk funds can boost prices as managers buy up shares with the new cash. However, big gains by junk bonds in general, and battered telecom junk specifically, might have as much to do with return-chasing as the merits. That means that bond prices could start to sink when flows to high-yield funds slacken.
 - v. Due to the Iraq war, risk-averse investors had little interest in loaning money to struggling companies. The yield spread between the average junk bond and the ten-year Treasury yawned to about 11 percentage points -- more than double its average -- as junk bond prices fell. With such high yields, junk was a bet that was hard to pass up.

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11. This is because investors should be looking not at relative value, but for the same high absolute returns that they would require of similarly risky equities. Junk, or high-yield bonds, is debt issued by companies with a low credit rating due to short or spotty records of accomplishment. Since companies with a lot of debt offer them, less than perfect credit, or both, they tend to pay far higher interest than investment-grade bonds. It sounds good, but investors only get that interest if the issuer does not default. Now when the investors look at the yield spreads of junk bonds and Treasuries, the spread is definitely attractive. However, it is not an indicator of value because the two belong to different risk class. Treasury bonds are highly safe with almost negligible risk, whereas junk bonds are highly risky. That is why the spread may alone not be the true indicator of value.

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