

Question Paper

Security Analysis-II (212) : July 2006

Section D : Case Study (50 Marks)

- This section consists of questions with serial number 1 - 6.
- 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. Analyze the Indian Textile industry based on the SWOT Analysis and give your opinion on the long-term prospects of the industry. [< Answer >](#)

(10 marks)
2. Analysts opine that a realistic estimate of the cost of equity of Apparel industry can be made by using the following formula:
$$R_f + 2 \times DE + 0.11 \times CV_{ROE}$$

Where, DE is average debt equity multiple and CV_{ROE} is coefficient of variation of ROE(%). The yield on 91-day T-bill is 5.5%. Using the data provided in Annexure I, compute the cost of equity of Arvind Mills.

(5 marks)

[< Answer >](#)
3. Analysts feel that the sale of the company is the major determinant for valuing the company's value per share. Compute
a. The value per share based on the company specific relative valuation. Cost of equity for the company specific data is based on the findings derived in the question above.
b. The value per share based on the industry specific relative valuation.
(Use Price to Sales ratio for the valuation of the company)

(6 + 6 = 12 marks)

[< Answer >](#)
4. Sometimes the Price to sales ratio can even be a contrary indicator of a company's valuation. Elucidate. Also suggest some similar better tool for valuation. [< Answer >](#)

(10 marks)
5. An Analyst considers the 30-Day Moving Average Chart (MAC) for his buy-sell decisions (Annexure II).
a. Indicate every buy-sell signals on MAC
b. Calculate the realized gain/loss made at every sell, if he follows the signals provided by 30-day MAC
c. Compare the net gain/loss of the strategy adopted in part (b) with that of buy and hold strategy.
(You can assume transaction cost for purchaser to be 0.5% and for seller to be 0.75% per transaction)
(Clearly state your assumptions.)

(2 + 5 + 1 = 8 marks)

[< Answer >](#)
6. Technical Analysts observe moving average more for 'crossovers' than for the changes in direction and obtain more clear-out buy-sell signals than those obtainable from trendlines. With respect to this, discuss the principles followed by moving averages. [< Answer >](#)

(5 marks)

INDIAN TEXTILE INDUSTRY

The WTO and the Textile industry

The issue of cotton subsidies in developed countries is one of the most contentious and challenging one for the World Trade Organisation (WTO). In the past the WTO has maintained that cotton should not be considered separately from other agricultural products, and the USA has supported this stance. However, the WTO stance was formally broken at the Doha Round ministerial conference in Hong Kong in December 2005, after a concerted two-and-a-half-year campaign by four West African cotton producing nations—Benin, Burkina Faso, Chad and Mali, known collectively as the C-4 group. The C-4 group was aided in its campaign by a legal challenge launched by Brazil against US cotton support policies in 2002. Brazil's challenge helped to raise the profile of the C-4 group's campaign and to secure worldwide coverage and widespread sympathy for the plight of the C-4 countries. All agricultural export subsidies will be eliminated by 2013 and domestic subsidies gradually reduced. In the case of cotton, developed countries are to eliminate export subsidies in 2006. Also, they will grant duty-free and quota-free access to exports from least developed countries (LDCs), although no timetable for this has been agreed. Domestic subsidies aimed at encouraging cotton growing will be gradually eliminated, and the WTO will find a way of channelling development assistance in order to mitigate poverty and improve the competitiveness and efficiency of cotton growing in least developed countries. However, some of these ambitions are likely to be strongly opposed in developed countries. Achieving them could therefore prove challenging.

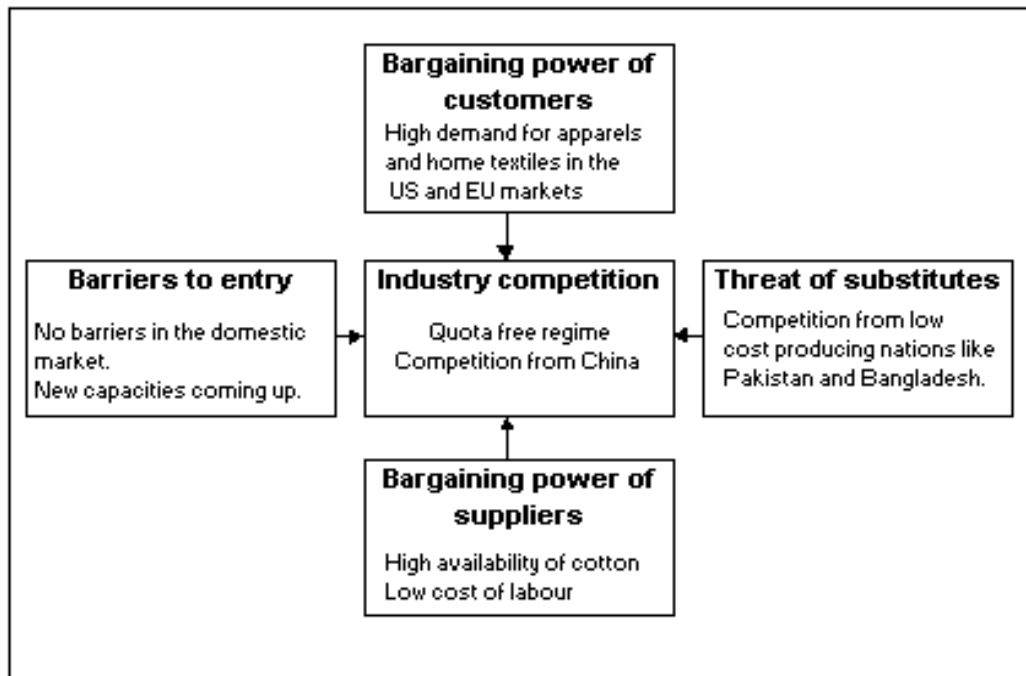
Asian textile industry post-quota era

On December 31, 2004, quotas were eliminated under the Agreement of Textiles and Clothing (ATC) and trade in textiles and clothing was thus reintegrated into the world trade system. When the ATC was conceived in 1994, the gains from quota elimination were expected to go to low wage and populous Asian countries such as India, Indonesia, Pakistan, the Philippines and Thailand. The losers were predicted to be small and marginal exporters, former large quota holders in East Asia, and firms in the EU and the USA. Indian textile industry offers end-to-end capabilities for manufacturing and processing yarn and has the ability to satisfy customer requirement across multiple product grades as well as small and large lot sizes. But the outlook for Asian suppliers other than China has been changed by China's entry to the World Trade Organization (WTO) in late 2001 and its growing dominance of Western markets. Asian suppliers will also be impacted by Preferential Trade Agreements (PTAs) giving non-Asian partners duty-free access to the EU and the USA. The proliferation of PTAs has cast doubt on whether Asian suppliers other than China will achieve the gains they were promised.

The USA, the EU and a few other WTO members have used safeguard quotas to protect their markets in the post-quota era. In the first few months of 2005 China made strong inroads into EU and US markets—at the expense of preferential suppliers and former large quota holders in East Asia. In contrast, Asian suppliers such as India, Indonesia, Bangladesh, Pakistan and Sri Lanka maintained or slightly improved their positions in the US market. Some are moving into higher quality products as they adjust to low cost competition from China. Meanwhile, in the post-quota era, efficient Asian production networks continue to be undermined by EU and US preferential trade deals, enforced by restrictive rules of origin. Such a situation could be avoided if negotiators at the WTO Doha Round were to prove successful in reducing EU and US textile and clothing import tariffs.

Textile industry in India

India is the world's second largest producer of textiles and garments after China. It is the world's third largest producer of cotton—after China and the USA—and the second largest cotton consumer after China. The textile and garment industry in India is one of the oldest manufacturing sectors in the country and is currently its largest. The textile and garment industry fulfils a pivotal role in the Indian economy. The per capita consumption of textile in India is 2.8 units compared to world average of 6.8 units. It is a major foreign exchange earner and, after agriculture, it is the largest employer with a total workforce of 35 mn. In 2005 textiles and garments accounted for about 14% of industrial production and 16% of export earnings. India has a setback in technological front where specialized integrated textile mills are to set up. The industry covers a wide range of activities. These include the production of natural raw materials such as cotton, jute, silk and wool, as well as synthetic filament and spun yarn. In addition an extensive range of finished products are made. The Indian textile industry accounts for about 23% of the world's spindle capacity, making it the second highest after China, and around 6% of global rotor capacity. Also, it has the highest loom capacity—including hand looms—with a 61% share. India accounts for about 12% of the world's production of textile fibres and yarns. This includes jute, of which it is the largest producer. The country is the second largest producer of silk and cellulose fibre and yarn, and the fifth largest producer of synthetic fibre and yarn.



Exports and expansion spree

Textile exports, which were growing at close to 10% before quotas were removed in '05, have grown nearly 20% to clock revenues of \$13bn for the calendar year 2005. India's textile exports can be broadly categorized into two large segments - apparel, which contributes nearly half the revenues, and non-apparel exports like yarn and fabrics, both natural and man-made. It is the former segment that brings higher margins to manufacturers. Indian Textile Industry is fragmented and unorganized, with 60% of firms in powerloom and the rest from handloom and mill sector. This is the unattractive part for Indian Textile industry because of global buyers who usually prefer less number of suppliers. Over the past one year, the significant change in India has been the higher value addition that the sector has achieved. The opportunities for Indian manufacturers are huge in ready-made garments. For instance, T-shirts made in India for \$5 or less, are sold in American stores for \$75 and more. India's ready-made garments sector was stripped off its small scale industry status less than three years ago. As a result, textile firms were able to undertake massive capacity expansion drives over the past couple of years. The extension of the Textile Upgradation Funds Scheme (TUFS) will allow for further expansion. Currently the sector employs, directly or indirectly, 3.5 crore people. Industry sources reckon that nearly 1 crore additional employment can be generated over the next two years, with India stealing a march over China. The Indian counterpart has cheap labour but when it comes to productivity it lags behind China, Sri-Lanka and other Asian countries. The domestic market, too, is expected to grow, by nearly 10% over the next few years, on the strength of higher disposable incomes and a predominantly young market. Home textiles are among the most dynamic export segments in India's textile industry. By focusing on the US market, India has become the USA's leading foreign supplier of towels, and one of its top three foreign suppliers of cotton sheets. Its success in home textile exports stems largely from the efforts of a few dynamic companies. These companies have spurred by their global ambitions and buoyed by their export success, they are in the midst of implementing large expansion programmes.

Chinese holdup may thrust Indian exports

The impediment on exports of Chinese textile products to the US and the EU until '08 could substantially push up Indian exports to these two destinations, according to the Union textile minister in a seminar. This may help India achieve the ambitious target of exporting \$50bn worth of textile products by '10. The minister said that India could witness high growth potential if the opportunity due to Chinese embargo could be combined with the fashion and design expertise in India and reduce losses created as a result of late deliveries. Already the positive implication of the restriction have started showing with exports to the US jumping over 44% in January this year to \$560m as compared to the same period last year. In contrast, the growth of Chinese exports slowed down to 11% in January '06 compared to over 70%, growth in the US and 33% in the EU in '05. India's per unit realization too grew over 11.4% in the last one year to touch \$4.19/sq meter up from \$3.77/sq meter. "This means that an Indian textile export is that of higher quality confirming that

India is going up the value chain”.

Textile and fashion

After Italy and Spain, India with its large base of youth and English speaking population could become the fashion hub for the world. Industry is in a need for more design intervention in the making of the fabric. With a sourcing split inevitable, Indian textiles companies will have to position themselves on the lines of either ‘cost’ or ‘speed to market’. Sources also feel that Indian companies will now have to adopt the ‘lean’ model to work more efficiently and focus more on the bottom-line growth. The need of the hour is to focus on areas such as delivery, quality, price and corporate compliance. If India wants to double its capacity in the textiles sector in the next five years, it requires investments to the tune of Rs.1,40,000 crore in garments, spinning, weaving and knitweares industry.

Impact of taxes on the industry

The Budget has extended special additional duty to all imported goods. This will apply to both agricultural and non-agricultural imports. Though certain items have been excluded, cotton now attracts a 4% additional duty, industry players and officials said. The 10% duty has also been retained. Many leading garment makers prefer yarn made out of imported cotton because it ensures better quality. The additional duty will have an impact on those importing cotton for producing yarn mainly for the local market.

Merger waves on the industry

The Indian textile industry is on a consolidation spree from the last couple of years. While the sector has been in the thick of M&A and fund raising activity in FY06, the deal sizes total to a little under Rs.800 crore. Analysts point out that this is because most of the textile companies are midsize, with very few clocking a turnover of over Rs.500 crore. The broad trends that emerged in the last year were cross border acquisitions and joint ventures to gain better access to developed markets, mergers and acquisitions in the domestic market to achieve globally competitive size, equity fund raising through private equity investors and debt fund raising under the technology upgradation fund scheme to support expansions. A large fibre base, with a rapidly growing garment sector, low cost skilled labour, a large domestic market and a stable economy is keeping the sector in the radar of the investors.

Arvind Mills

The Arvind Mills was set up with the pioneering effort of the Lalbhai brothers in 1931. With the best of technology and business acumen, Arvind has become a true Indian multinational, having chosen to invest strategically, where demand has been high and quality required has been superlative. Today, the Arvind Mills Limited is the flagship company of Rs.20 billion (US\$ 500 million) Lalbhai Group.

Arvind’s Strategy and Philosophy

In the mid 1980’s the textile industry faced another major crisis. With the power loom churning out vast quantities of inexpensive fabric, many large composite mills lost their markets, and were on the verge of closure. Yet that period saw Arvind at its highest level of profitability. There could be no better time, concluded the Management, for a rethink on strategy. The Arvind management coined a new word for it’s new strategy – Renovision. It simply meant a new way of looking at issues, of seeing more than the obvious and that became the corporate philosophy. The national focus paved way for international focus and Arvind’s markets shifted from domestic to global, a market that expected and accepted only quality goods. An in-depth analysis of the world textile market proved an eye opener. People the world over were shifting from synthetic to natural fabrics. Cottons were the largest growing segments. But where conventional wisdom pointed to popular priced segments, renovision pointed to high quality premium niches. Thus in 1987-88 Arvind entered the export market for two sections. Denim for leisure and fashion wear and high quality fabric for cotton shirtings and trousers. By 1991 Arvind reached 1600 million meters of Denim per year and it was the third largest producer of denim in the world.

Global scenario

Arvind Mills has set the pace for changing global customer demands for textiles and has focused its attention on selected core products. Such a focus has enabled the company to play a dominant role in the global textile arena. With its presence across the textile value chain, the company endeavors to be a one-stop shop for leading garment brands. Forevision and Technology has brought Arvind to be one of the top three producers of denim in the world, and on its way becoming the Global Textile Conglomerate. Arvind is already making its presence felt in Shirting’s, Knits and Khakis fabrics apart from being all set to create ripples in the ready to wear garments world over.

Quota regime

Year 2005 is a watershed year for textiles. With the multifiber agreement getting phased out and the disbanding of quotas, international textile trade is poised for a quantum leap. In the domestic market too, the rationalizing of the cenvat chain and the growth of the organized retail industry is likely to make textiles and apparel see an explosive growth. Arvind has carved out an aggressive strategy to verticalize its current operations by setting up world-scale garmenting facilities and offering a one-stop shop service, of offering garment packages, to its international and domestic customers.

Finance

Arvind Mills is acclaimed in the Indian corporate field for its financial skills. Be it the phase of rapid growth or downturn; the company has demonstrated swift, sharp and robust financial acumen to navigate the company through different phases of economic cycles. Arvind Mills was the first textile company from India to issue GDRs in the year 1992-93. Highly complex financial restructuring exercise involving more than 80 domestic and international lenders which the company implemented following the major downturn in the business cycle during year 2000-2002 is considered to be the benchmark for the Indian corporate. Arvind Mills has been making judicious choice of fund-raising avenues in the domestic as well as international markets so as to construct very efficient capital structure, which is in the tune with operating risks and enhances the shareholders' value.

Risk Management

The Company has laid down the Risk Management policy to manage the financial risks emerging out of currency and interest rate risks. It runs an active treasury desk so as to make use of modern hedging tools available to manage financial risks. Arvind Mills was the first Textile Company in India to implement ERP, SAP as back as in the year 1997-98. The company follows best accounting practices to prepare its financial statements as envisaged in the Indian and international accounting standards.

Utilities

Arvind established its own naphtha based combined cycle cogeneration plant in 1997. The same has been converted into natural gas fuel. Being operated on natural gas fuel it is totally emission free and environment friendly. Arvind is serving the nation by preserving the precious resources with establishment of highly efficient combined cycle cogeneration plant both at Naroda and Santej (main two facilities). At the same time it is also serving the objective to provide stable, reliable, uninterrupted quality power and economic steam. The exhaust waste flue gases of gas turbines efficiently utilized to generate the high-pressure steam from Heat Recovery Steam generators, which again generate the power from steam turbine. The low pressure extracted steam from the steam turbines serve the steam requirement of the textile process. Almost 70 % of the heat energy of the fuel are being recovered. By achieving the highest availability constant production needs are being attained. By maintenance of constant quality power in terms of voltage and frequency which attributes to consistent production rate with less maintenance of the equipment.

Raw Materials

Yarn, dyes, chemicals and spare-parts are forming part of materials (other than Cotton) in the process of manufacturing. Arvind Mills has policy to make global sourcing so as to optimize quality and cost of these inputs. The company has stringent quality standards and has well equipped testing facilities to ensure adherence to these standards for inward-materials. While procuring the dyes and chemicals it also ensures that internationally accepted Eco-norms are met with. Arvind Mills deals with internationally renowned names. The material sourcing team employed by Arvind Mills is consisting of mix of engineering as well as commercial skills so as to ensure that both quality and costs are optimized. This team in cooperation with manufacturing team continuously works on product and vendor developments. Arvind Mills follows the Purchase Policy and Standard Operating Procedures laid down by one of the large international advisory firms, in the materials management function.

Arvind as a brand

With the Indian economy poised for rapid growth, Arvind brands with its international licenses of Lee, Wrangler, Arrow and Tommy Hilfiger and its own domestic brands of Flying Machine, Newport, Excalibur and Ruf & Tuf, is setting its vision on becoming the largest apparel brands company in India. Arvind Mills limited, today is a force to reckon with in the entire chain of Textile Industry. The yarns out of Arvind spinning mills are taken to be of the best quality. The company has its foothold in the Denim fabrics, being one of the top three producers of Denim worldwide. The shirting fabric is one of the most premium products out of Arvind stable and some varieties sell at a premium in international markets. Khakis are fast making inroads in the export market. Knits division today boasts of serving some of the best brands in the world and is in the process of ramping up the capacities looking at the potential demand. On top of it, today with the focus on the made ups, Arvind has already set up facilities in Bangalore, in south India, which would cater to some of the best names in the ready made garments industry. The management, out of their office at Bangalore, India manages the entire retailing (including manufacturing, branding, logistics, marketing and sales). The following additional

information is available for the company:

Audited financial results of Arvind Mills Limited for the year ended on

(Rs. in Crore)

No.	Particulars	31/03/2006	31/03/2005
1	Net Sales/Income from Operations	1592.00	1654.91
2	Other Income	22.52	4.99
3	Total Expenditure :		
	(a) (Increase)/Decrease in Stock in Trade	9.82	(12.76)
	(b) Consumption of Raw Materials and Finish Goods Purchased	504.70	619.87
	(c) Staff Cost	135.74	123.09
	(d) Power & Fuel	143.57	178.85
	(e) Stores Consumption	171.09	145.44
	(f) Other Expenses	219.48	218.63
		1184.40	1273.12
4	Interest & Finance Cost	129.98	116.00
5	Foreign Exchange (Gain)/Loss	8.66	(7.59)
6	Depreciation	155.10	149.07
7	Profit before Tax (1+2-3-4-5-6)	136.38	129.30
8	Provision for Taxation - Current Tax	11.40	1.95
	- Deferred Tax	8.27	0.00
	- Fringe Benefit Tax	0.95	0.00
	- MAT Credit Entitlement	(11.40)	
9	Net Profit (7-8)	127.16	127.35
10	Paid-up Equity Share Capital (Face Value Rs.10/- per share)	209.38	195.38
11	Reserves excluding revaluation reserves as per Balance Sheet	0.00	1019.75
12	Basic & Diluted Earning Per Share (Rs.)- (Not Annualised)	5.98	6.28
13	Aggregate of non-promoter Shareholding		
	- No. of Shares	138849756	123070344
	- Percentage of Shareholding	66.32%	62.99%

Additional information:

Company specific information:

The textile industry is expected to maintain high growth rate for 10 years after which the growth is expected to drop to 5%. The company is expected to follow the industry growth rate pattern after 10 years. The dividend payout ratio for the company will remain at the current level for the 10 years after which it is expected to increase to 60%. The sales to book value multiple for the company is expected to be 1.2 for the next 10 years. Company is expected to maintain the current net profit margin irrespective of the growth.

Industry specific information:

The average net profit margin of the other firms in the industry is 5%. Industry's average sales to book value multiple is 2 and it is expected to remain at that level for next 10 years. The industry average Payout ratio is 22%, industry is expected to maintain the same payout ratio in the high growth period after which it will increase to 45%. The average industry beta is 1.05. The excess return on the market over T-bill rate for the industry is 5.5%.

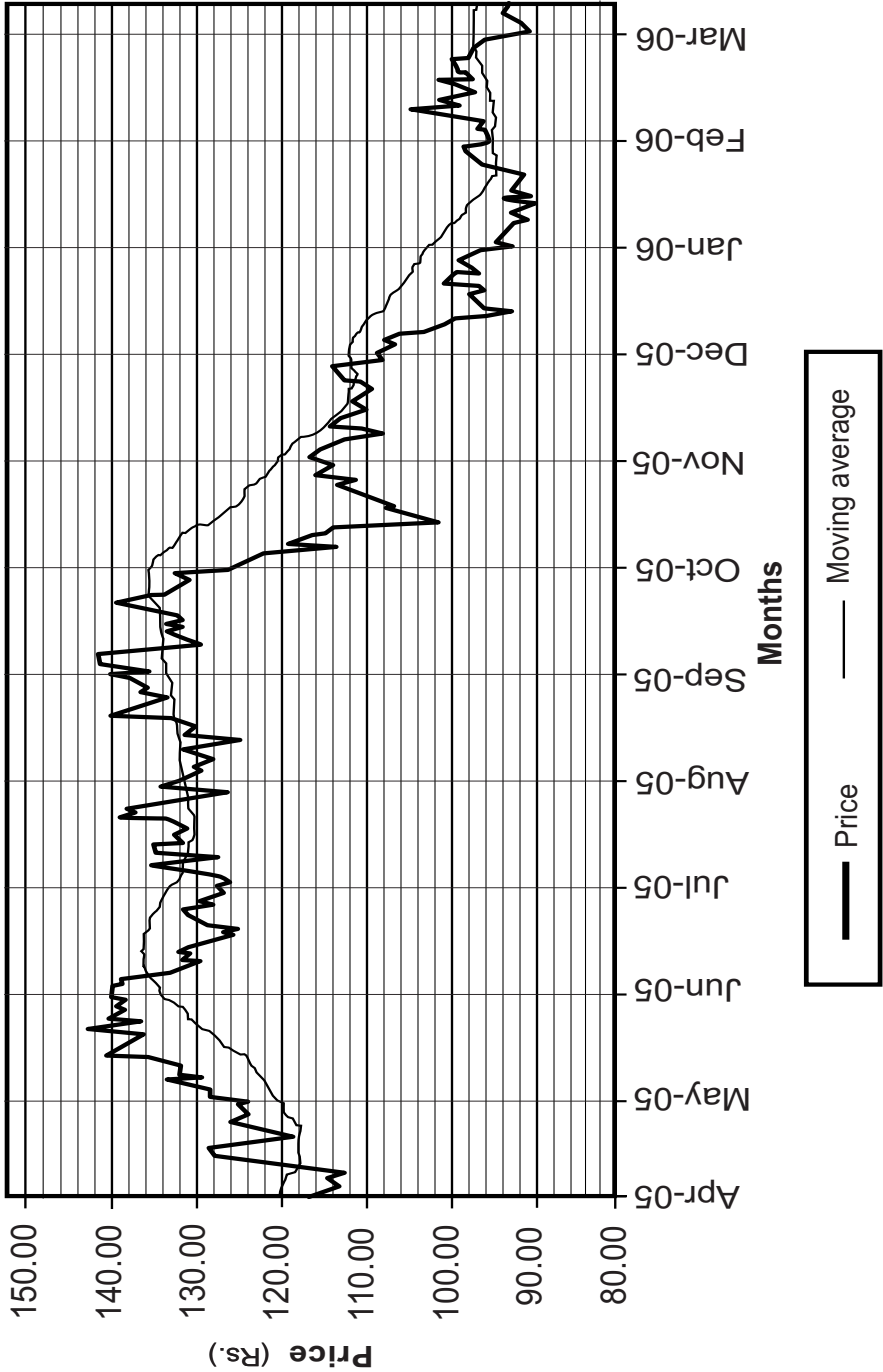
Annexure I

Year	2001-02	2002-03	2003-04	2004-05	2005-06
PAT	20.26	129.33	96.75	127.35	127.16

Debt	1638.71	1340.20	1355.40	1682.42	1946.82
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Annexure II

30-day Moving Average Curve of Arvind Mills Ltd.



END OF SECTION
D

Section E : Caselets (50 Marks)

- This section consists of questions with serial number 7 - 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:

7. With respect to the caselet, discuss the process of Margin trading with an example.

[< Answer >](#)

(9 marks)

8. Delineate the risk involved in the margin trading.

[< Answer >](#)

(9 marks)

The margin trading and securities lending in India is governed by the Securities Contracts (Regulation) Rules, 1957. The provisions of this Act were interpreted to suggest that the rules did not permit brokers to take up fund-based businesses. In this context, SEBI examined these provisions. It later took a view in the year 1997 that a broker cannot perform this business as his 'prime activity.' It was interpreted that a broker could lend/borrow money only if it was incidental to securities transactions. SEBI followed up by issuing a clarification during the same year. The situation in the post-clarification period presented a confused picture as some brokers started doing the margin trading, whereas a few others still needed assurances for conducting the business. Later in the year 2001, the capital market witnessed major reforms with the implementation of compulsory rolling settlement on T+5 basis and the banning of Modified Carry Forward System (MCFS), Automated Lending and Borrowing Mechanism (ALBM), The Borrowing and Lending Securities Scheme (BLESS). As a result, such developments created even more uncertainties in the minds of brokers who felt that the rules of the game should be more organized and explicit.

The brokers are still not very clear about their role and stakes in this business. The number of participating brokers is still very low. SEBI needs to bring clarity in the regulations concerning the role of brokers vis-à-vis margin trading and securities lending. With regard to the banking system, the very fact that the ceiling limit of 5% is to be maintained along with individual ceiling limits of Rs. 10 lakh and Rs. 20 lakh for demat securities is a clear indication that the RBI has not been able to look beyond the existing scope of securities business even under the changed circumstances. Necessary homework to integrate the potential of margin trading and securities lending and relate the same to the banks' balance sheets is an exercise that remains to be completed. Individually, a majority of banks have also not evinced the necessary dynamism in formulating the internal guidelines and for establishing systems to implement and manage the margin trading. Some have already reached the 5% ceiling limit and have little room for doing this business. The clients are exposed to very high levels of risk due to lack of information. The present bullish market trends are similar to the one that was witnessed in the 1990s. Given this experience, the Indian capital market needs to infuse more confidence for furthering margin trading and securities lending. Clearly, the banking system is not poised to aid this business. The lead has to come from the brokers' community with adequate clarity and safeguards should be provided by SEBI to ensure smooth conduct of this business. Apparently the small step, which could be a 'giant leap' for the business in India, is yet to be taken.

Caselet 2

Read the caselet carefully and answer the following questions:

9. Discuss how "for profit" and "not for profit" stock exchanges are different in their ownership structure.

[< Answer >](#)

(9 marks)

10. Discuss the problems associated with Self Listing.

[< Answer >](#)

(9 marks)

Most of the stock exchanges across the world are “not for profit” organizations and are owned by members organized as mutual associations. Now after the “for profit” organization the question of listed stock exchanges is now a new focus in India. MCX requested for an IPO. A recent SEBI report says that regional stock exchanges should do IPOs and list on themselves. BSE could get listed, possibly on BSE. But exchanges are not ordinary firms, where we applaud when the firm graduates from startup to IPO. Listed exchanges pose daunting policy questions. In the bad old days, an exchange was a club of brokers. It was run by brokers, in the best interests of brokers. This led to malpractice. Today, we know that what works best is a three-way separation between owners, managers and trading members. The pioneers in this new “demutualised” framework were the Stockholm Exchange (1993) and India’s NSE (1994). Over the years, most major global exchanges have moved towards this structure to some extent or the other.

The managers have their reputations to protect; they only earn a salary, and have no financial interest in profits of either exchange or members. This helps them be impartial. The owners are institutions such as UTI, who are also the biggest consumers of the services of the exchange. A higher dividend from the exchange is small change to an owner like ICICI Bank, when compared with the benefits from a better run exchange. Hence, the interests of the owners are aligned with those of users of the exchange and the country at large. The governance problems of a demutualised exchange are qualitatively altered by going public. This brings in a set of owners (the shareholders) who demand dividends. Post-issue, the management team owns shares, has stock options, and gets bonuses linked to profits. The management team then gets a direct financial incentive to increase turnover and thus the profit of the exchange. The quest for turnover is incompatible with the regulatory and supervisory functions of an exchange.

Internationally, IPOs by exchanges have been preceded by much cogitation and public debate about these conflicts of interest. As an example, the US SEC had an elaborate consultation-and-committee process leading up to a policy position on listed exchanges. Policy responses include placing regulatory functions of a listed exchange in a separate non-profit organisation, with a wholly separate management team and board, and a separate funding stream. A limit of 5 per cent ownership by a single shareholder has been placed in Singapore, Hong Kong, the Philippines and Tokyo. A variety of strictures have been placed to address the dangers of self-listing.

Caselet 3

Read the caselet carefully and answer the following questions:

11. According to the caselet, Bond ETFs differs from Bond Ladders. Discuss. Also state the disadvantages attached with Bond ETFs.

(7 marks)

12. Bond ETFs are given priority over Index Funds. Discuss.

[< Answer >](#)

(7 marks)

In India, ETFs were first introduced by Benchmark, an asset management company on January 8, 2002. The first fund launched by the company was Nifty BeEs (Benchmark Exchange Traded Scheme), Which is the first ETF product in Asia, excluding Japan and third in the emerging markets. An ETF is a type of Investment Company whose investment objective is to achieve the same return as a particular market index. An ETF is similar to an index fund in that it will primarily invest in the securities of companies that are included in a selected market index. Be sure to compare your alternatives before investing.

Now, Bond ETFs are also becoming popular among the investor community especially those who immunize their liabilities. But bond ETFs differ from bond ladders. Unlike stock trading - for which automation has leveled the playing field for retail and institutional investors - the bond market lacks liquidity and price transparency except for the most liquid of bonds. For the self-directed bond investor, for whom it may make little sense to invest in expensive actively managed bond funds, exchange-traded funds (ETFs) which track bond indices may offer a good alternative.

The suppliers of bond ETFs get around the liquidity problem by using representative sampling, which simply means tracking only a sufficient number of bonds to represent an index. The bonds used in the representative sample tend to be the largest and most liquid in the index. Bond ETFs are given priority over index funds. Also, given the liquidity of government bonds, tracking errors will be less of a problem with ETFs that represent government bond indices. However, bond ETFs are suitable

for particular strategies. If, for instance, you are looking to create a specific income stream, bond ETFs may not be for you.

**END OF SECTION
E**

**END OF QUESTION
PAPER**

Suggested Answers

Security Analysis-II (212) : July 2006

Section D : Case Study

1. SWOT Analysis

[< TOP >](#)

Strength

- Abundant availability of raw materials: India is one of the largest producers of natural and man-made fibers. Abundant raw material availability allows the sector to control costs and reduce overall lead times across the value chain.
- Low cost skilled labour: When compared to developed nations like England and France, India is aggressively positioned on the labour cost front. In terms of hourly wages, Indian labour is as much as 20 times cheaper than its western counterparts.
- Presence across the textile value chain : Unlike countries like Bangladesh and Sri Lanka, India has end-to-end capabilities for manufacturing and processing yarn, fabrics and apparel. Garmenters are able to source their raw materials locally, reducing lead times. In addition, Indian firms have the ability to satisfy customer requirements across multiple product grades as well as small and large lot sizes.

Weakness

- Fragmented industry: The Indian textile sector is extremely fragmented with over 60% of the firms in the powerloom sector, the rest being spread over handloom and mill sector. Indian sellers find it difficult to meet the capacity requirements of their global buyers who usually prefer to source their requirements from not more than three vendors.
- Lower Cost Competitiveness: While the labour costs in India are competitive, the productivity is lower compared to other low-cost nations like China and Sri Lanka. Other costs such as power, taxes and interests are high, thus lowering India's cost competitiveness.

Opportunity

- Growing domestic market: The per capita consumption of textiles in India is 2.8 units, way below the global average of 6.8 units, indicating a significant potential for growth. A domestic market relatively sensitive to fashion fads has spurred the growth of the garment industry locally. An emerging local opportunity thus allows textile firms to mitigate risks and build competitiveness.

Threat

- Historical regulations: The sector is burdened by several historical regulations, which leave behind the legacy of a complex industry structure, as well as the absence of a viable exit option for industry players.
- Technology obsolescence: A large portion of the processing capacity is absolute and while integrated textile mills exist, majority of the capacity lies in the powerloom sector.

In addition, competition from cheaper imports in the local market, ecological and social awareness resulting in increased pressure on the industry to follow international labour and environmental laws and regional alliances can play spoilsport. But these aside, there is no denying that several opportunities exist for the Indian textile sector. The opportunity lies in moving up the value chain, investing in design centers, and focusing on product development. Restructuring and streamlining of operations form a huge part of what textile companies need to do. While major players in the organized sector have undertaken modernization programmes, there is still a fairly long way to go in terms of adoption of information technology.

2.

[< TOP >](#)

Year	2001-02	2002-03	2003-04	2004-05	2005-06
PAT	20.26	129.33	96.75	127.35	127.16
Networth	1007.54	1067.58	1181.33	1281.15	1371.12
Debt	1638.71	1340.2	1355.4	1682.42	1946.82
ROE	2.01	12.11	8.19	9.94	9.27
D/E	1.63	1.26	1.15	1.31	1.42

Calculation of Co-efficient of variation:

ROE		
2.01	-6.30	39.68
12.11	3.80	14.47
8.19	-0.12	0.01
9.94	1.63	2.66
9.27	0.96	0.93
41.53		57.75

Mean = $41.53/5 = 8.31$

Variance = $57.75/(5-1) = 14.44\%^2$

Standard deviation = 3.8%

Therefore,

Coefficient of variation = Standard deviation / mean * 100
 $= 3.8/8.31 * 100$
 $= 45.75\%$

Calculation for the calculation of average Debt/Equity ratio:

Average debt/equity ratio = $(1.63 + 1.26 + 1.15 + 1.31 + 1.42) / 5 = 1.35$

Therefore, $K_e = R_f + (2 * \text{Average D/E ratio}) + (0.11 * \text{co-efficient of variation of ROE})$

$K_e = 5.5 + (2 * 1.35) + (0.11 * 45.75)$
 $= 13.23\%$

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Arvind mills		
	Next 10 years	After 10 years
Payout ratio	0	60%
Sales/book value	1.2	–
Expected growth	9.6%	5%
Cost of equity	13.23	13.23
Profit margin	8	8
Beta		

Expected growth rate for Arvind mills ltd. = $(1 - \text{Payout ratio}) * \text{Profit margin} * \text{Sales to book value ratio}$
 $= (1 - 0) * 0.08 * 1.2$
 $= 0.096 \text{ i.e. } 9.6\%$

Price to sales ratio can be found out from the following formula:

$$\text{Price to Sales ratio} = 0.08 \times \left[\frac{0.00 \times 1.096 \times \left(1 - \frac{(1.096)^{10}}{(1.1323)^{10}} \right)}{0.1323 - 0.096} + \frac{0.6 \times (1.096)^{10} \times 1.05}{(0.1323 - 0.05)(1.1323)^{10}} \right]$$

$$= 0.08[5.526]$$

$$= 0.4421$$

Now, Sales per share for the company is Rs.76.03

Therefore Price for the company is $76.03 \times 0.4421 = \text{Rs.}33.61$

Industry		
	Next 10 years	After 10 years
Payout ratio	22	45
Sales/book value	2	–

Expected growth	7.8%	5%
Cost of equity	11.275%	11.275%
Profit margin	5	5
Beta	1.05	1.05

$$K_e = 5.5 + 1.05 \times 5.5 = 11.275\%$$

$$\begin{aligned} \text{Expected growth rate for the Industry} &= (1 - \text{Payout ratio}) * \text{Profit margin} * \\ &\quad \text{Sales to book value ratio} \\ &= (1 - 0.22) * 0.05 * 2 \\ &= 0.078 \text{ i.e. } 7.8\% \end{aligned}$$

Price to sales ratio can be found out from the following formula:

$$\begin{aligned} \text{Price to Sales ratio} &= 0.05 \times \left[\frac{0.22 \times 1.078 \times \left(1 - \frac{(1.078)^{10}}{(1.11275)^{10}} \right)}{0.11275 - 0.078} + \frac{0.45 \times (1.078)^{10} \times 1.05}{(0.11275 - 0.05)(1.11275)^{10}} \right] \\ &= 0.08[7.3382] \\ &= 0.5871 \end{aligned}$$

Now, Sales per share for the company is Rs.76.03

Therefore Price for the company is $76.03 \times 0.5871 = \text{Rs.}44.64$

4. When analyzing companies, sometimes price-to-sales ratio is of little help in understanding how a company is [really](#) valued by the market. There are two main reasons against the Price to sales ratio for being a contrary indicator

1. Not all sales dollars are created equal.

Some sales come with a high degree of profitability, while some only bring pennies on the rupees invested. Let's take a real-world example of grocery store company versus software behemoth. Take a look at each company's margins:

Company	Grocery store	Software
Gross Margin	86.9%	24.4%
Oper. Margin	47.6%	4.8%
Net Margin	41.0%	1.4%

It should be painfully obvious that every dollar in sales that Software company brings in is much more valuable (about 30x more valuable!) than every dollar in sales that Grocery store brings in. Comparing price to sales ratio on an apples-to-apples basis is not a good idea because the sales of two different companies mean entirely different things to the bottom line and, ultimately, to the cash flow-generating capability of each. In the end, Price to Sales Ratio figures would differ greatly. Any talk of sales figures without a concurrent talk of margins is useless.

2. The Price to Sales Ratio ignores capital structure

One of the peculiarities of the Price to Sales Ratio is that it actually favors companies with high levels of debt. Because it compares one number (market capitalization) that is dependent on a company's capital structure to another number (sales) that is not, it essentially ignores whether a company is funded with equity or debt. This is not a trivial distinction. For example. Assume below that we have three companies with exactly the same businesses. They each have identical future prospects and operating income, and the only difference is the capital structure and the amount of debt used to finance each.

Details	Company A	Company B	Company C
Sales	Rs.100	Rs.100	Rs.100
Gross Profit	Rs.40	Rs.40	Rs.40
Operating Income	Rs.15	Rs.15	Rs.15
Interest Expenses	0	Rs.15	Rs.40
Pretax Income	Rs.15	0	(Rs.25)
Taxes	Rs.5	0	(Rs.8)
Net Income	Rs.10	9	(Rs.17)

Total Assets	Rs.200	Rs.200	Rs.200
Net Debt	0	Rs.150	Rs.400
Assumed Market Capitalization	Rs.300	Rs.150	Rs.10
Price to Sales Ratio	3.0	1.5	0.1

Even though all of the companies are in the same boat operationally, the Price to Sales Ratio shows that companies B and C are actually cheaper than company A. In fact, the Price to Sales Ratio points to company C as the cheapest of the bunch, even though it is the one that appears headed towards bankruptcy. Thus, this shows that higher amounts of debt actually tend to skew the Price to Sales Ratio lower, sometimes significantly.

A better tool to use is the so-called "enterprise value-to-sales" ratio, or EVSR. A company's enterprise value is the company's market capitalization plus debt minus cash. Think of enterprise value as the buyout price one would have to pay to buy all the stock, retire all the debt, and then use the leftover cash to offset the cost. By comparing enterprise value instead of market capitalization to sales, at least we can take a company's capital structure into consideration.

Finally, the Price to Sales Ratio is not only useless in many cases, but it can also sometimes be a contrary indicator of a company's valuation. This is why it is important to look at several ratios as a group to get a sense of a company's cash-flow generating capacity and the price the investors have to pay to get proportionate share of that cash flow.

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Net benefits table by active trading

No.	Month	Signal	Price (Rs.)	Transaction cost (Rs.)	Net price (Rs.)	Net gain (Rs.)
1	Apr-May	Buy	118	0.59	118.59	
2	Jun-July	Sell	136	1.02	134.98	16.39
3	July-Aug	Buy	132	0.66	132.66	
4	July-Aug	Sell	132	0.98	131.01	-1.65
5	July-Aug	Buy	131	0.66	131.66	
6	July-Aug	Sell	131	0.99	131.02	-1.64
7	July-Aug	Buy	131	0.66	131.66	
8	Aug-Sep	Sell	132	0.99	131.01	-0.65
9	Aug-Sep	Buy	132	0.66	132.66	
10	Sep-Oct	Sell	134	1.01	133.00	0.34
11	Sep-Oct	Buy	134	0.67	134.67	
12	Sep-Oct	Sell	136	1.02	134.98	0.31
13	Nov-Dec	Buy	112	0.56	112.56	
14	Nov-Dec	Sell	112	0.84	111.16	-1.40
15	Jan-Feb	Buy	95	0.48	95.48	
16	Feb-March	Sell	98	0.74	97.27	1.79

Therefore the gain made by the analyst is Rs.13.49 per share if follows the 30-day moving average for buy and sell decision.

Buy and hold strategy

Buy @ Rs.116, sell @ Rs.94

Therefore, Loss= 93.00 – 116.00

= (Rs.22.00)

6. Following are the principles followed by Moving Average Curve:

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When the moving average rises above the price line, a reversal in bullish trend is signalled. This is based on the simple logic that as long as price at the end of a period is above the average that prevailed in the immediate past, prices are on an uptrend. The converse is true for confirming the end of a bear market. The price line in that case would crossover the moving average.

The price line moving average crossover has to be examined cautiously when the price line and moving average move in opposite directions before the crossover. The price line that falls below a rising moving average only

indicates a secondary reaction and need not signal a trend reversal. Similarly, a price line that rises above a falling moving average is an indication to sell.

A moving average represents a smoothened trend and therefore, also acts as a support/resistance line. A declining price line often finds support at the moving average line and rallies without crossing the line. Similarly, a rally in a bear market meets resistance at the moving average, and turns down.

If the moving average is flat or has already begun to change direction, a crossover by the price line is a fairly reliable indicator of trend reversal.

The significance of a crossover signal depends, to a large extent, on the time span covered by a moving average. A moving average covering a longer time span is actually smoothening a long-term trend, and its crossover is more significant than a crossover of an average of shorter time span.

Section E: Caselets

Caselet 1

7. To buy securities, an investor must have funds in his account and to sell securities he must have the share in his demat account. But sometimes investors may not have sufficient money to buy particular securities. In such a situation, he can take a loan from his broker up to a certain percentage as prescribed by the norms. In addition, if there is a fall in the share price to a certain level he has to pay the deficit amount. In other words, the investor has to maintain a margin throughout the period. If the margin falls by a level (normally prescribed by SEBI) the broker can liquidate the client's holdings. The "margin" here is the money actually borrowed from the broker, who uses the investor's stocks thus purchased as collateral for the funds advanced. It helps to leverage to funds several times. Margins are quoted as a percentage of the value of the transaction. Let us understand the process by an example. [< TOP >](#)

Suppose an investor wants to buy 100 Reliance industries shares, whose market price is Rs.500. This transaction requires Rs.50,000 but the investor has only Rs.30,000 as bank balance. He can approach a broker who will invest money on his behalf, taking interest for the same. Now he invests 50% of the amount (i.e., Reliance) and the broker puts in the other half on his behalf and buys 100 Reliance shares in his name. suppose maintenance margin is 40%, and if it falls below 30%, the broker has the right to sell the stock. Now the stock may fall to 410, then the loss is Rs.90 per share. In this case the loan from the broker is still 25,000 but the investor's own account equity will fall to Rs.16,000. Now his maintenance margin equals 39.20% ($\text{Equity Account}/\text{market Value of Holding} \times 100$ i.e., $16,000/41,000 \times 100$). In this case the broker can ask him for the balance to take the margin to the 40% mark. He has to deposit $(41,000 \times 40\% - 16,000)$ or 400 to maintain the level of 40%.

8. For doing trading, the clients generally depend on the brokers for funds and securities. In this market, the interests of the lender are well protected. Clauses relating to the initial margin requirements, the need to maintain such margin, and the right to sell the securities go in favor of the lender. So, the lender is required to implement prudent risk management practices for the recovery of principal and interest. Further, the lender also needs to take quick decisions and act swiftly for making margin calls and for selling the securities in time. The risks of loss to the lender are three-fold: The transaction cost for selling the securities, the liquidity risk arising out of a failure to sell the securities and the loss of interest on the loan. [< TOP >](#)

As the lenders have to put in place the most appropriate risk management systems, the presence of such systems minimizes the risks to the market in particular and the financial system in general. However, even in this situation, the tendency towards volatility and price manipulation are factors that contribute to risk. In case of rising market, the client could resort to over-trading thereby exposing himself and lender to risk.

Caselet 2

9. The transformation of a stock exchange into a "for-profit shareholder owned company" is referred to as demutualization. Though this is not the standard definition, the main difference between a traditional stock exchange and a demutualized exchange is that the latter is run on "for-profit" basis, where ownership and management are delinked. The process of demutualization can be defined as moving away from a member controlled exchange to become a public by traded company. [< TOP >](#)

The transformation of a mutual member-based exchange to a demutualized exchange involves the transferability of ownership from members to non-members (shareholders). This involves the conversion of

existing membership to share ownership. The members of the mutual-based exchange either have the option of selling their membership or retaining their hold on the demutualized exchange by converting their membership into share ownership. To avoid potential and hostile takeover by other exchanges and to prevent individuals and group holders with vested interests from having greater control on the demutualized exchange, regulators restrict the ownership holding of an individual or group of holders to below 5% or 10%.

10. While listing of a demutualized exchange either can be done in itself or in other exchanges, the problem of governance particularly lies with the former. The exchange is supposed to exercise regulatory power over a listed firm, demanding that it comply with listing rules. For example, it is tough to get good enforcement by the BSE of listing rules upon the BSE. When a stock exchange goes for an IPO or goes public, and contemporary HR practices are followed, it is inevitable that managers will end up thinking like owners. This leads to a breakdown of the separation between owners and managers. The listed exchange does not have a three-way separation: it only has a two-way separation, between the owner/manager and the trading member. [< TOP >](#)

While top exchanges internationally have indeed gone public, they operate in a very different environment of competent regulation and effective justice system. But the same is not the case in India, where just punishment is unlikely and there is a low risk of punishment. These arguments also suggest that the core institutions of the securities industry are not ordinary firms which should progress from startup to IPO. With an ordinary firm, the corporate governance puzzle is that of making managers act as if they are shareholders. But with exchanges, the governance puzzle is that of getting managers to not think like shareholders. When the management team of an exchange thinks like an owner, it seeks to maximize turnover, and incentives are created for malpractice. In the Indian environment of weak regulators, weak judicial processes, mistakes in drafting laws, and politically well-connected exchanges, even good people can do bad things. Hence, when it comes to the core securities infrastructure, we need to stay on course with the quest for three-way separation between owners, managers and trading members. What we have seen of the successful functioning of demutualised exchanges in India reflects a genuine three-way separation, with managers who are not owners, and owners who think more like users of the exchange, and less like recipients of dividends.

Caselet 3

11. The liquidity and transparency of an ETF offers advantages over a passively held bond ladder. Bond ETFs offer instant diversification and a constant duration, which means an investor needs to make only one trade to get a fixed-income portfolio up and running. A bond ladder, which requires buying individual bonds, does not offer this luxury. One disadvantage of bond ETFs is that they charge an ongoing management fee. While lower spreads on trading bond ETFs help offset this somewhat, the issue will still prevail with a buy-and-hold strategy over the longer term. The initial trading spread advantage of bond ETFs is eroded over time by the annual management fee. The second disadvantage is that there is no flexibility to create something unique for a portfolio. For example, if an investor is looking for a high degree of income or no immediate income at all, bond ETFs may not be the product for him or her. [< TOP >](#)
12. Bond ETFs and index bond funds cover similar indices, use similar optimization strategies and have similar performance. Bond ETFs, however, are the better alternative for those looking for more flexible trading and better transparency. The composition of the underlying portfolio for a bond ETF is available daily online, but this type of information for index bond funds is available only on a semi-annual basis. Furthermore, on top of being able to trade bond ETFs throughout the day, active traders can enjoy the ability to use margin, sell short and trade options on these securities. [< TOP >](#)

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