

Question Paper

Security Analysis - II : April 2001

Part D : Case Study (50 Points)

- This part consists of questions with serial number 1 – 5.
- Answer **all** questions.
- Points are indicated against each question.
- Do not spend more than 80 – 90 minutes on Part D.

Case Study

Read the case carefully and answer the following questions:

1. Perform Michael Porter's analysis on the paint industry based on the given information.
(9 points)
2. Analyse the RoE of Snowwhite Paints Ltd in terms of its five components for the years 1997-98 to 1999-00 and comment on the same.
(12 points)
3. Analyse and comment on the cash flow statement of Snowwhite Paints Ltd for the last four years.
(8 points)
4. Determine whether the share of Snowwhite Paints Ltd is correctly priced on April 1, 2001 based on the following equation:
Share price = $5 + 0.75 \text{ PE} + 0.25 \text{ DDM}$, where PE is the value of the share according to PE model and DDM is the value of the share according to the dividend discount model.
The dividend per share paid by the company is expected to grow at 20% for the next three years and at 8% forever thereafter. The required rate of return of equity shareholders is 18%.
The PE ratio can be determined according to the following equation:
 $\text{PE} = 14 + 1.15 \text{ EG} - 0.55 \text{ RR}$, where EG is the compounded rate of earnings growth and RR is the average retention ratio in the last four years, both expressed in decimals.
(13 points)
5. From the given information, steep changes can be seen in the trade volume of the shares of the company and also the share price. Explain how trading volumes, when studied along with share prices, give valuable insights on future trends in the stock prices.
(8 points)

The utility of paints has evolved from a decorative use to a surface protection use. Also, known as surface coatings, paints can be classified on the basis of end use, solvent system and solid content.

- a. End Use classification: Under this heading, paints can be classified as decorative/ architectural paints and industrial paints. As the names suggest, decorative paints are mainly used for household and construction purposes while industrial paints are used as coatings for industrial products. Main types of decorative paints are enamels, acrylic emulsions, distempers and exteriors and primary types of industrial paints are marine paints, anti corrosive metal coatings, etc.
- b. Solvent based classification: This includes paints, which use petro products or water as the main solvent. Water based paints are gaining popularity due to their environment friendliness.
- c. Solid content: Can be classified as liquid or solid (powder) paints. Powder coatings find application mainly in the white goods industry.

The decorative segment dominates the market in India with a 70% share with the rest accounted for by industrial paints. This is as compared to the developed countries where the share is the reverse with the industrial segment being the major one. With increased industrialization, the ratio in India is also likely to change in the favor of industrials and both segments are likely to be equal partners by the end of five years.

Market Size of Decorative Paints

Segment	Rs mn
Enamels	8600
Wall Finishes	4730
Primers	2150
Wood Finishes	430
Total	15910

Market Size of Industrial Paints

Segment	Rs mn
Auto	4386
CRP	1075
Powder	860
Coil	95
Others	731
Total	7147

Industry Characteristics

- Working Capital intensive: The number of shades is very large and a sufficient stock of every shade has to be maintained at all levels of the distribution channel, the working capital cycle is very high. The extent can be gauged from the fact that Asian Paints has a 12000 strong dealer network selling more than 150 shades. Also, the number of raw materials required can stretch upto 300. As majority of these raw materials are either imported or sourced from small chemical manufacturers, a large stockpile needs to be maintained.
- Low Fixed asset requirement: A plant for the manufacture of decorative paint can be set up with a small capital investment. However, the major investment is in setting up distribution channels and building up a brand.
- Seasonal nature of demand: The demand peaks during festival season while is very lean during monsoons. Thus, a major part of the sales are achieved in the second half of the fiscal year.

Global Scenario

The global demand for paint is estimated at over 21 MTPA and valued at about \$60bn. The industry is expected to grow at 3% over the next few years. The high growth regions are the developing countries of SE Asia and Latin America while the mature markets of North America and Western Europe are likely to witness very low growth. The share of industrial paints is nearly 70% and the rest is accounted for by decorative segment. Also, the leading players control almost 60% of the world market. The largest player is ICI of UK with a share of around 10% followed by Akzo Nobel (Netherlands), PPG (US), Nippon (Japan), BASF (Germany) and Kansai (Japan). Over the past few years, the industry has been consolidating with an objective to strengthen product lines and distribution chains. This has led to a series of mergers and acquisitions.

Industry Structure**Organized Sector**

The organized sector has a market share of 60% valued at Rs26bn. The share has increased from 55% three years back as the excise on paints was reduced. Asian Paints is the leader with a share of 41% in the organized segment followed by Goodlass Nerolac, and ICI respectively. Asian Paints and ICI are mainly decorative paint producers, Goodlass has major share in the industrial paints segment whereas Snowwhite is almost a generic name for cement paints.

**Market Share (FY 99)
(Organised Sector)**

Asian Paints	41%
Goodlass Nerolac	21%
ICI	15%
Berger Paints	13%
J&N	6%
Shalimar	4%

Unorganized Sector

There are estimated 2500 small-scale producers accounting for 40% of the market. The unorganized sector proliferated due to low capital investment required and fiscal concession by the government. The high excise duty of over 40% before 1992 created a large price differential. The steady decrease in excise to the present 18% has taken away the advantage. Moreover, the introduction of MODVAT has further reduced the incidence of excise. Over the long run, the share of the small scale is likely to come down further and would be restricted to low quality, low price paints.

Demand - Supply Scenario

Paint demand is intrinsically related to economic development. The demand for decorative paints in India mainly arises from two segments viz. Construction of new buildings and retail demand for refurbishment, while the demand for industrial paints comes from industries like automobiles, consumer durables, shipping, engineering, etc.

The demand for paints has grown at 10% for the last five years. After a sluggish growth in late 80s and early 90s, industry grew at a rapid pace of more than 12% from 1992-96. High excise duties and lacklustre industrial growth resulted in low growth of 2-4% during 1987-92. After 1992, the industry picked up aided by improving economic conditions and rationalization of excise structure. Almost the entire growth can be attributed to volume increase as price realization has increased at less than 5% p.a. Over the last two years, demand has slowed down due to the economic slowdown.

According to Indian Paints Association, demand will rise from the current 0.6mn tonnes per annum to almost 1mn tpa by 2003. Demand for decorative paints will be led by the household construction industry which is expected to grow at almost 8% over the next five years considering the extreme shortage of housing and the government's thrust on encouraging housing activity. The centers of housing activity are also likely to shift more towards rural areas. The industrial segment will grow faster due to the lower base and fast growth in major user industries like consumer durables and automobiles.

Major Raw Materials

- **Titanium Dioxide (TiO₂):** This is the most important raw material and accounts for 50% of raw material cost. It is available in two grades- rutile and anatase. Rutile grade Titanium Dioxide, the more expensive of the two are used in high value decorative paints and industrial paints. In India, rutile grade TiO₂ is manufactured by Kerala Minerals & Metals Ltd. (KMML) while anatase grade TiO₂ is manufactured by three producers viz. Travancore Titanium products Ltd. (TTPL), Kolmak Chemicals Ltd. & Kilburn Chemicals Ltd. While the quality of Indian rutile grade is good, it is not the case for anatase grade. Moreover, the manufacturers face constraints of power supply and capital and are in poor financial condition. Thus, a large portion of TiO₂ demand is met from imports.
- **Phthalic Anhydride: PAN,** the other major raw material is now abundantly available in India. There are almost seven producers with a total capacity of over 280,000 tonnes. I G Petro and Thirumalai Chemicals are the major players accounting for nearly 80% of the capacity. The other major user industry of PAN is the PVC manufacturing industry.
- **Organic Pigments:** The pigments consist of white or coloured particles, usually in the form of a powder, which give a paint its colour and opacity. Though the quantities used are small, their prices are very high. The major manufacturers are Sudarshan Chemicals (technology from Dai Nippon of Japan), Colour Chem and Clariant (both subsidiaries of Clariant AG).
- **Pentaerythritol:** It is used for the manufacture of synthetic resins. Availability of penta is not a problem as there are a few players including Asian Paints, which manufacture the product.

Production Process

Paint production involves mixing of various raw materials in a balanced proportion. Based on a predetermined formula, pigments, extenders, resins and additives are ground together in a dispersion or grinding mill. The ground mixture is then dispersed in a medium, which could be based on oil or water depending on the paint produced. The final volume and shade are obtained by adding resins, driers, solvents and some additives to the concentrated dispersion.

Emerging Trends and Opportunities

Technology

The introduction of tinting machine has significantly changed marketing technology. These machines each costing approximately Rs.60mn are installed at dealer outlets and enable the customer to choose between any of

several hundred shades. These are then generated by mixing dyes with the base paint, and delivered almost instantly. The two major implications of this machine are:

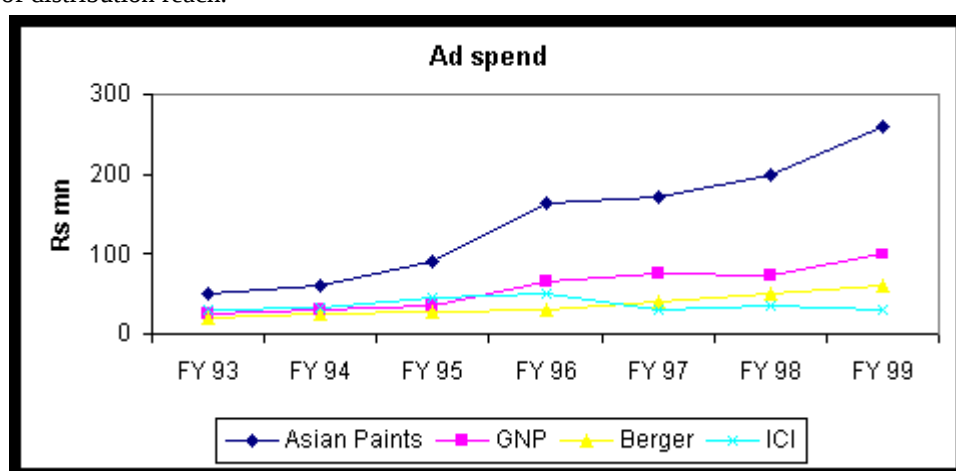
- Differentiation on colour range is reduced: Prior to this technology, a major competitive advantage of a company was the range of colours it offered. For instance, Asian Paints offered almost 150 shades in its synthetic enamel range, unmatched in the industry. This now stands changed as almost 2000 shades can be created in seven minutes through these machines.
- Simplified logistics management: With the machines generating shades instantly, dealers can now stock only the base material and thus save almost 20-25% in the working capital cycle.

Expansion of Product Profile

The lowering of excise has opened the high volume but low value market in the semi urban and rural areas, which is currently dominated by the unorganized sector.

Increased Thrust on Brand Creation and Distribution

The increased share of organized sector implies that brand awareness will be a thrust area. Also, strong brands are emerging as the most important entry barrier. The opening up of rural markets has also necessitated the expansion of distribution reach.



Dealer Network	Nos.
Asian Paints	14500
Goodlass	7000
Berger	5500
ICI	4500

Industry Consolidation

The small scale industry is expected to witness a shake out as the share of organized sector increases. Also, outsourcing requirements are likely to be reduced as new capacities go onstream in the organized sector.

New Segments Opening Up

With increased industrialization, new segments like auto refinishing market are likely to expand rapidly. Already companies like ICI have launched specialized brands for this segment.

Outlook

The industry is expected to grow at 10% CAGR for the next five years driven by increasing industrialization and increasing disposable incomes. The per capita consumption is a low 0.55 kg per annum, as compared to around 4 kg in SE Asian economies and more than 20 kg in the developed countries. This outlines the untapped potential.

The emerging trends in technology and marketing imply that the industry is likely to consolidate over the next few years with the marginal players being wiped out and industry leaders gaining market share. Thus, critical success factors will shift from manufacturing to marketing and distribution.

Large international players are likely to either enter India or enhance their presence in India in view of the growing market. Thus joint ventures and strategic alliances will be the order of the day. Indian companies will also need to tie up with international majors to have access to the latest technology

Snowwhite Paints Ltd

Background

SPL was incorporated in 1959 and the company commenced operation in Oct '59 in collaboration with Blue Circle group. The company came with a public issue in June '95 to fund expansion of Sandtex Matt capacity at Gummidipundi near Chennai, besides relocating its facilities at Mamba to Sinner near NASA and meeting its working capital requirements. George Lillington & Co., UK currently has 28.62% stake in Snowwhite while the Indian promoters have 28.78% stake. The company has entered into a technical collaboration with George Lillington for specialty chemicals.

Snowwhite is the pioneer in India, in the manufacture of cement specialties, surface coatings, concrete waterproofers and hardeners used in the building and construction industries. The company's two main products - Snowwhite and Sandtex Matt (plastic emulsion paint) dominate the premium segment and are estimated to have market shares of 33% and 65% respectively. The major brands are:

Brand	Application
Snowwhite Plus	Decorative water proof cement coating
Sandtex Matt	Long lasting decorative and protective finish
Snowcryn - XT	Acrylic exterior paints
Impermo	Cement waterproofing compound
Impermo (liquid)	Cement waterproofing compound
Hardcrete	Concrete waterproofing & hardening liquid
Snowplast	Acrylic finishing plaster for interiors
Cemprover	Cement primer
Uni-Glosss	Multi surface paint system
Trump	Economical and smooth emulsion paint for exterior

In FY99 Snowwhite launched Snowcryn XT, a premium acrylic smooth exterior finish and Impermo (liquid), a cement waterproofing compound.

In the current year, the company has launched three new products in various niche segments. In super premium niche market, the company has launched Uni-Glosss, which can be applied on concrete, wood and metal. In economy class, Snowwhite has launched Trump, smooth emulsion paint for exteriors having qualities like weatherproof, anti-fungus and anti-algae. In interior decorative segment, Snowwhite has launched Snowplast, acrylic-finishing plaster for interiors.

In FY99, the company has enhanced powder paint capacity at Gummidipundi. The enhanced production capacity will enable the company to export in the neighboring and South East Asian countries.

Overseas ventures

Snowwhite has identified three locations namely Bangladesh, Nepal and Vietnam for setting up manufacturing units in the future. The company has yet to take final decision but expects that overseas plant to go upstream by 2001.

Amendment in MOU

Snowwhite has amended its Memorandum of Association to enter into the field of gold products, precious metals of all kinds, chemicals, alloys, electronic machineries, goods and accessories and other merchantable products.

The company has acquired entire stake in Sashak Trading Ltd, which is implementing a project related to fabrication of gold and silver products, atomization of gold for industrial uses and specialty paints for decorative purpose. This project is first of its kind in India with latest technology from a leading American Company.

Profit & loss account (Rs mn)

Period ended	03/97	03/98	03/99	03/00
No. of months	12	12	12	12
Gross sales	563.5	627.8	775.5	1,112.0
Excise duty	(100.7)	(108.9)	(129.7)	(150.4)
Net sales	462.8	519.0	645.8	961.6
Other income	85.7	34.7	34.8	47.4
Total income	548.5	553.7	680.6	1,009.0
Raw materials	316.0	318.7	409.7	411.2
Stock adjustment (Inc)/ Dec	(24.1)	(3.6)	(22.2)	(22.1)
Purchase of finished goods	-	-	-	260.0
Cost of material	292.0	315.1	387.4	649.2
Employee cost	26.3	35.5	39.1	30.9
Power & fuel	3.3	3.7	5.8	5.3
Advertising/ promotion/ public	54.5	73.0	33.0	30.3
Freight & forwarding	-	-	53.4	59.9
Other expenses	22.2	28.6	50.4	62.6
Cost of sales	398.2	456.0	569.1	838.2
PBIDT	150.2	97.7	111.5	170.8
Interest & finance charges	15.4	19.4	36.1	60.5
PBDT	134.9	78.3	75.4	110.3
Depreciation	4.5	7.2	12.3	13.5
PBT	130.3	71.1	63.2	96.8
Provision for taxation	12.5	15.0	6.7	11.7
Adjusted PAT	99.5	51.3	56.5	85.1
Dividend payout	22.7	28.9	28.9	32.6

Balance sheet (Rs mn)

Period ended	03/97	03/98	03/99	03/00
No. of months	12	12	12	12
SOURCES OF FUNDS				
Equity capital	96.0	100.4	100.4	100.4
Capital reserve	2.0	2.0	2.0	2.0
Share premium account	153.7	193.2	193.2	193.7
Revaluation reserve	6.4	6.2	5.9	5.7
Profit & Loss/ General reserve	166.4	189.3	216.9	269.4
Reserves and surplus	329.1	390.6	418.0	470.8
Net worth	425.1	491.0	518.5	571.2
Secured loans	84.5	91.2	175.4	277.0
Unsecured loans	41.4	68.6	223.0	450.3
Total debt	125.9	159.8	398.3	727.3
Capital employed	551.0	650.9	916.8	1,298.5

Period ended	03/97	03/98	03/99	03/00
APPLICATION OF FUNDS				
Gross block	139.7	223.5	266.5	348.2
Accumulated depreciation	(25.8)	(33.2)	(45.7)	(58.6)
Capital work in progress	18.4	9.7	11.9	3.4
Total fixed assets	132.2	200.0	232.6	293.0
Investments	1.0	61.0	63.8	93.8
Inventories	84.2	84.4	128.2	151.6
Sundry debtors	163.9	165.9	263.7	556.6
Cash & bank balance	17.0	12.1	23.6	18.1
Total loans & advances	286.2	299.7	386.8	414.2
Sundry creditors/ Acceptances	(64.8)	(89.2)	(110.4)	(152.1)
Other liabilities	(21.3)	(23.7)	(65.0)	(56.2)
Provisions	(47.4)	(59.4)	(42.8)	(48.9)
Net current assets	417.8	389.8	584.1	883.4
Miscellaneous expenses	-	-	36.3	28.3
Capital deployed	551.0	650.9	916.8	1,298.5

Cash flow statement (Rs mn)

Period ended	03/97	03/98	03/99	03/00
No. of months	12	12	12	12
Pre tax income from operation	44.7	36.5	28.4	49.4
Depreciation	4.5	7.2	12.3	13.5
Expenses (deferred)/written off	0.0	0.0	(36.3)	8.0
Other income/prior period adj	67.3	29.8	34.8	47.4
Tax	(12.5)	(15.0)	(6.7)	(11.7)
Cash profits	104.0	58.4	32.5	106.6
(Inc)/Dec in trade working capital				
-Inventories	(26.3)	(0.2)	(43.9)	(23.3)
-Sundry debtors	(32.6)	(2.0)	(97.8)	(292.9)
-Sundry creditors	(0.1)	24.4	21.2	41.7
-Others	33.6	14.4	24.8	(2.8)
Net adjustment	(25.4)	36.6	(95.7)	(277.3)
Operating activities	78.6	95.0	(63.3)	(170.7)
(Inc)/Dec in fixed assets	(5.7)	(75.2)	(45.1)	(74.1)
(Inc)/Dec in investments	0.0	(60.0)	(2.8)	(30.0)
(Inc)/Dec in loans & advances	(255.7)	(13.5)	(87.1)	(27.4)
Investing activities	(261.3)	(148.7)	(135.0)	(131.5)
Inc/(Dec) in debt	20.1	33.9	238.5	329.0
Inc/(Dec) in equity/premium	174.2	43.8	0.1	0.4
Change in capital reserves	0.8	0.0	0.0	0.0
Direct add/(red) to reserves spl item	22.5	0.0	0.0	0.0
Dividends	(22.7)	(28.9)	(28.9)	(32.6)
Financing activities	194.8	48.9	209.7	296.8
Cash generated/(utilized)	12.1	(4.8)	11.4	(5.4)
Cash at start of the year	4.9	17.0	12.1	23.6
Cash at end of the year	17.0	12.1	23.6	18.1

The share of the company, which has a face value of Rs.10 is regularly traded on various exchanges. The recent monthly quotations are as follows:

Date	Open	High	Low	Close	Volume
01/01/2000	153.90	157.96	145.04	150.98	52045
01/02/2000	129.74	132.36	124.49	127.37	14665
01/03/2000	88.00	89.67	82.17	84.69	10850
01/04/2000	69.50	71.26	67.28	69.33	7311
01/05/2000	74.63	73.41	68.13	75.02	9952
01/06/2000	71.40	72.78	69.89	71.20	2581
01/07/2000	64.57	66.20	63.25	64.43	2460
01/08/2000	63.57	65.00	61.91	63.58	8150
01/09/2000	60.91	62.10	59.46	60.12	3041
01/10/2000	50.25	51.84	49.06	49.87	4919
01/11/2000	56.29	58.28	55.57	56.93	6294
01/12/2000	64.88	66.46	62.81	64.78	11794
01/01/2001	60.23	61.10	58.89	59.71	16302
01/02/2001	63.90	66.38	62.85	63.91	7530
01/03/2001	53.78	54.80	51.30	52.17	6043

END OF PART D

Part E : Caselets (50 Points)

- This part consists of questions with serial number 6 – 12.
- Answer **all** questions.
- Points are indicated against each question.
- Do not spend more than 80 – 90 minutes on Part E.

Caselet 1

Read the following caselet carefully and answer the following questions:

6. Describe a few criteria based on which stocks can be identified for momentum investing. (8 points)
7. Compare momentum investing with growth investing. (7 points)
8. Describe the risks involved in momentum investing. (6 points)

Momentum investors buy stocks that have a trend of going up in price with an expectation that the market has not yet properly priced it. It is assumed that stocks that have appreciated will appreciate more. Prime momentum signals further price increases and is presumed to persist. Recalling the demand-price relationship, when a large number of investors chase a few growth stocks, they can drive the price of the stocks up. At this juncture, other investors tracking the same momentum stocks also jump on the board to grab the opportunity. This rush towards momentum stocks set off another round of price increases, to attract new investors. Again there will be a price rise because of this rush of new investors. As this phenomenon will go on and on, the prices of such stocks will leave the realm of economic reality. An uncanny mindset emerges; each time investors think that this time it is different and that it will continue the momentum. But this strategy brings investors to such a position that if prices of stocks crash, it is impossible to rescue them. About momentum investing style Dileep

Madgavkar says “ Momentum investing is nothing but riding the trend. The investors enter the market once they sense it to rise and exit as the market starts losing up the stream or the upward momentum. So, it is basically a momentum play-you track the market and keep swinging along the market trend.”

Momentum investors are often blamed by market observers for running up stock prices in fleetingly popular segments of the market. It has been seen that momentum investing delivers volatile results, growing phenomenally when the market is in its favor and collapsing when there is little market momentum. Thus, investors opted for momentum strategy should constantly track the stocks so that they can frequently buy and sell and earn the capital gain. Such investors should be aware of the fact that they have been pitted against seasoned market players who are also fully equipped with advance technical analysis tools.

Momentum investors should be experts in the game as they are required to jump on the trend early and then time their exit before other players. Though the second part of it is difficult, such investors should have control over their greed and gratification. In fact, momentum investing can be compared with a train ride. A momentum investor catches a train when it is about to leave. He is happy as the train gets accelerated and then maintains its momentum. The momentum investor is very careful as the train gets decelerated he pulls the emergency cord and dismounts.

Caselet 2

9. Why do you think is the position ‘sell Infosys’ coupled with ‘buy nifty futures’ less risky than the earlier use of stocks as surrogates for the index? Explain.

(7 points)

10. How can a position in index futures be used to hedge an underlying position on stocks?

(8 points)

The stock market offers a most elegant example of the distinction between speculation and hedging, and the appropriate role for each. Today, in India, we see numerous ‘speculators’ on the equity (cash) market. Enormous speculative trading volumes are observed on NSE and BSE. We see individuals who are ‘buy ITC’ or ‘sell ITC’. It is useful to go closer to these positions and link them up with the underlying rationale. There are exactly two cases. Many times, positions on stocks like ITC or Reliance are undertaken while treating the stock as an index proxy. A person is bullish about the ‘broad market movement’ and adopts a position in a few highly liquid stocks so as to profit from it.

In this case, the person is actually an index speculator. His positions of a few stocks are inefficient proxies for the index. Now that index futures are available, his speculation would be more efficiently implemented using the index futures market. The ‘buy Nifty’ position is a more efficient bet on the index than a ‘buy ITC’ position.

Alternatively, there are people who are truly stock speculators. A person may truly be pessimistic about Infosys, because he has thought about the valuation of Infosys and thinks that the market price is presently too high. In this case, this ‘sell Infosys’ position is an inefficient implementation of his view. This is because Infosys could additionally fluctuate because of broad market movements.

The analysis of Infosys could be right, but the position could yield losses because Nifty raises the position ‘sell Infosys’ combines speculation on Infosys with gambling on Nifty. Until today, stock pickers in India could not escape the Nifty exposure when they worked on valuing stocks. In the absence of an index futures market, every stock picker in India was forced to be an index gambler.

There is a superior alternative that’s now available - the position ‘sell Infosys’ coupled with ‘buy Nifty’ futures. In this sense, every speculative position the equity cash market can now be done more efficiently using the index futures market. Index speculators can now directly implement views on the index, without using inefficient proxies. Stock speculators can hedge away their latent index exposure, and hence avoid gambling on the index when they speculate on a stock. In doing so, they obtain less risky positions which are focused on their core competencies.

Caselet 3

11. Does the entry of banks and financial institutions into retail finance indicate that the entry barriers are low? Explain.

(8 points)

12. What are the major factors that cause risk to a financial services company?

(6 points)

The last couple of years have seen significant developments in the financial sector that have raised competition across-the-board. Non-banking finance companies (NBFCs) have perhaps felt the pressure most. Consequently, top-rung (NBFCs) are changing tack, and initiating moves to become financial supermarkets. They are seeking to provide as many services as possible, and their fate will be decided by how successful they are.

Leading NBFCs have gradually extended their product portfolio to include asset management companies (AMCs), housing finance firms and are now readying to enter insurance.

This trend seems different from that of the early 1990s when most NBFCs rushed to launch a merchant-banking subsidiary. But this could not be sustained with the poor business in the primary market and the industrial slowdown. Most such merchant banking subsidiaries have been wound up.

But the NBFCs' latest moves to increase the lines of business may be of a more permanent nature despite the growing competition from the resource-rich banks and financial institutions in core and emerging areas. The last few years saw the traditional boundaries between different categories of financial intermediates disappear. Thus, the NBFCs had to contend with heavy competition even in areas that were their preserve.

Working capital loans were traditionally the preserve of banks, and term lending that of the financial institutions. Now these sets of institutions move in and out each other's areas freely. And both have also moved into retail financing, the traditional preserve of the NBFCs.

Traditionally, the NBFCs have dominated the market for retail finance. Their forte has been credit delivery to areas not converted by banks and FIs. Thus, NBFCs are perhaps better acquainted and more sensitive to the latent needs of the retail customer. With such new areas as insurance being opened up, top-rung NBFCs are presented with an opportunity to grow. But these areas fall outside the NBFCs' traditional sphere of competence and raise questions about the sensibility of their move.

A financial intermediary's business is dominated by the attendant risk. Given the banks' ability to access low-cost funds, they are likely to service the relatively top-end clients, leaving others with the riskier customers.

The issue assumes greater significance considering that the average NBFC will be pushed down to relatively untouched or untapped areas where credit information may be scarce. But this perception does not hold water when one considers that the top NBFCs have one of the lowest levels of non-performing assets (NPAs) in the financial sector.

END OF PART E

END OF QUESTION PAPER

Suggested Answers

Security Analysis – II : April 2001

Part D : Case Study

1. Michael Porter analysis of the paint industry is as follows:

a. **Threat of Entry:**

The amount of capital investment required is low. So the threat of entry is high. This is evidenced by the fact that there are a large number of players in the unorganized sector in this industry. In the organized sector, there are some players like Asian Paints Ltd, who command high brand equity and a large share of the market. This when combined with the requirement of a large distributor network and high working capital, make the barriers to entry high and the threat of entry low in the organized sector.

b. **Bargaining Power of Buyers:**

The buyers of this industry are the final consumers whose bargaining power is insignificant for decorative paints.

For industrial paint bargaining power of the buyer is significant.

c. **Bargaining Power of Suppliers:**

One of the main raw materials, Titanium Dioxide is partly produced in India and partly imported. There are no problems with the availability of this raw material. Among the other raw materials, excepting the Phthalic Anhydride, for which 80% of the production is concentrated in the hands of two suppliers, there is no such concentration of production capacity with few suppliers for any other raw material. Keeping everything in view, excepting the import of Titanium Dioxide, about which no information about the suppliers is available, it can be said that the bargaining power of suppliers is low. The suppliers of Phthalic Anhydride also cannot exercise much bargaining power because of the presence of other 5 producers as well as the low growth in demand at present.

d. **Threat of Substitute Products:**

There are no substitute products for paints. Hence threat of substitute products is almost non-existent.

e. **Competitive Rivalry among the Players:**

The rivalry among the existing players is high. While Asian Paints is ahead of others, the competitors are trying hard to gain some ground. This is revealed by the increase in adspend of Asian Paints and the competitors. The rivalry is going to increase with the rural and suburban markets, till now catered to by the unorganized sector, getting opened to the organized players.

2. The RoE analysis of the company is as follows:

Description	03/97	03/98	03/99	03/00
SALES	462.80	519.00	645.80	961.60
PBIT	145.70	90.50	99.20	157.30
PBT	130.30	71.10	63.20	96.80
PAT	99.50	51.30	56.50	85.10
TOTAL ASSETS	684.50	823.20	1135.00	1555.70
NETWORTH	425.10	491.00	518.50	571.20
I. PBIT/SALES	0.31	0.17	0.15	0.16
II. SALES/TOTAL ASSETS	0.68	0.63	0.57	0.62
III. TOTAL ASSETS/NETWORTH	1.61	1.68	2.19	2.72
IV. PBT/PBIT	0.89	0.79	0.64	0.62
V. PAT/PBT	0.76	0.72	0.89	0.88
VI. ROE (I x II x III x IV x V)	0.2296	0.1023	0.1067	0.1472

From the above calculations, it can be seen that the RoE of the company decreased steeply in the year 1997-98 and then stabilized and showed an upward trend in 99-00. The fall in the RoE has been basically due to fall in the ratio of PBIT to sales. Subsequently, the assets turnover ratio also decreased, though not steeply. This has also contributed to the fall in RoE, along with the ratio of PBT to PBIT, which also decreased. The decrease in the latter ratio was due to a steady increase in interest and financial charges. There has also been a slight decrease in the ratio of PAT to PBT. The improvement in performance in

years 1998-99 has been brought about by an increase in PAT/PBT, which indicates that the effective tax rate of the company is decreasing, and an improvement in the assets turnover ratio. The improvement in the ratio of total assets to networth has also contributed to a significant extent.

The overall picture, thus, is change in trend in the profit margin, that is, PBIT to Sales. This is accompanied by an increase in total assets to networth, which points towards increased leverage. This is in consonance with the consistent fall in the ratio of PBT to PBIT.

3. The operating activities have been providers of cash in the first two years, but then they turned major users of cash. A major portion of the cash used by the operating activities has been taken up by an increase in sundry debtors and inventories. This need not be a cause of concern, as there has been a corresponding increase in the sales of the company during the latter period and given the fact that this industry is working capital intensive, this can only be expected. Thus, in spite of the cash from operations increasing, cash from the operating activities is negative. Investing activities have also been a user of funds as the company has been investing significantly in its fixed assets. The cash required has been brought in basically by the financing activities - basically increase in debt. There has not been any significant increase in equity during the period. This is being reflected in the debt equity ratio of the company, which has been steadily rising. But, the ratio is still around 1.25, which is a safe level. The interest coverage of the company is also at reasonable levels, though not very high, at 2.6. Thus, the cash flow statement of the company suggests that the company is in a safe and healthy condition.
4. The price of share on April 1, 2000 was Rs.69.33. If the value calculated using the models given is the same, it can be said that the share is correctly priced. The value of the share according to the model given can be calculated as follows:

The PE ratio of the company is given by:

$$PE = 14 + 1.15 EG - 0.55 RR$$

The earnings growth (EG) of the company in the last four years can be calculated as follows:

$$(1 + g) = (85.1/99.5)^{1/3}$$

$$g = -5.08\%$$

The average retention ratio (RR) of the company can be calculated as follows:

	03/97	03/98	03/99	03/00
PAT	99.50	51.30	56.50	85.10
Dividend	22.70	28.90	28.90	32.60
Payout ratio	22.81	56.34	51.15	38.31

$$\text{Average payout ratio} = 42.15\%$$

$$\text{Average retention ratio} = (1 - 0.4215) = 57.85\%$$

$$PE = 14 - 1.15 \times 0.0508 - 0.55 \times 0.5785 = 13.62$$

$$\text{The earnings per share expected in the next year} = (85.10/10.04) \times (1 - 0.0508) = 8.05$$

$$\text{The value of the share} = EPS \times PE = 8.05 \times 13.62 = \text{Rs.}109.64$$

$$\text{The dividend per share paid by the company at present} = 32.6 / 10.04 = \text{Rs.}3.25$$

$$\begin{aligned} \text{The value of the share at the end of three years from now} &= (3.25 \times (1.2)^3 \times 1.08) / (0.18 - 0.08) \\ &= \text{Rs.}60.65 \end{aligned}$$

$$\begin{aligned} \text{The value of the share as per DDM at present} &= (3.25 \times 1.20 / 1.18) + (3.25 \times 1.20^2 / 1.18^2) \\ &\quad + (3.25 \times 1.20^3 / 1.18^3) + (60.65 / 1.18^3) = 46.99 \approx \text{Rs.}47 \end{aligned}$$

$$\text{The value of the share according to the model will be} = 5 + 0.75 PE + 0.25 DDM$$

$$= 5 + 0.75 \times 109.64 + 0.25 \times 47 = 98.98$$

The share is underpriced on April 1, 2000 according to the given model.

5. The following, in brief, are the principles to be borne in mind while studying Price-Volume relationships:
- i. A price rise that is accompanied by expanding volume is a normal market tendency and therefore is not indicative of any potential trend reversal.
 - ii. A new high reached with a volume that is actually diminishing is a warning to a reversal in price (Figure A)
 - iii. A rally which reaches a new high would also be accompanied by a volume that is higher than that obtained at the preceding peak. If volumes obtained at a new high are lower, a trend reversal is indicated. (Figure A)
 - iv. After a slow expansion over a period, sometimes both prices and volume work into an exponential rise. This is indicative of heavy off-loading by bulls and is called a 'speculative blow off' and marks the end of the bull market. Price and volumes both fall sharply after this development. (Figure B)
 - v. When prices recover after a bearish phase and subsequently react to a level equal to or slightly above the previous low, if the volume accompanying such reaction is lower than that obtained at the previous low, a bullish trend is indicated. Lower volumes accompanying such reactions is indicative of the weakness of the reaction. (Figure C)
 - vi. A reversal in trend indicated by a downside breakout from a price pattern, trend line or moving average, can be acted upon if accompanied by heavy volumes, which confirms the bearish sign. (Figure D)
 - vii. Termination of a bear market is often signaled by a 'selling climax'. A selling climax occurs when prices fall for a considerable time at an accelerated pace and are accompanied by expanding volume. Price may be expected to rise subsequently. (Figure E and F)
 - viii. An accumulation in the course of a bearish market, accompanied by high volume, indicates persistent efforts to push up prices, and would spark a bullish phase. Similarly, a distribution accompanied by increased volume is a bearish factor. However, where volumes do not increase at an accumulation or distribution, the indication is that there is only a consolidation of the prevailing trend. (Figure G and H).

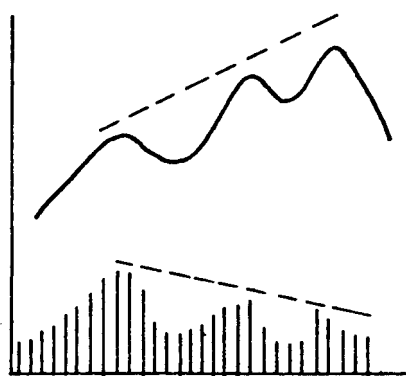


Figure A

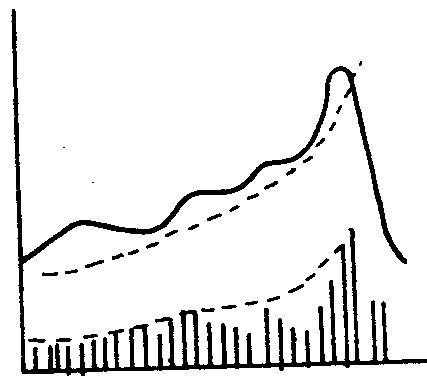


Figure B

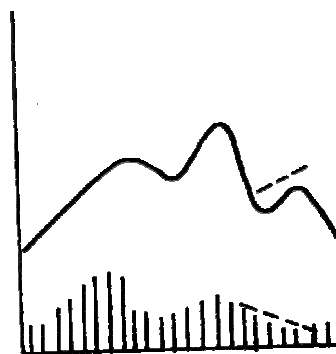


Figure C

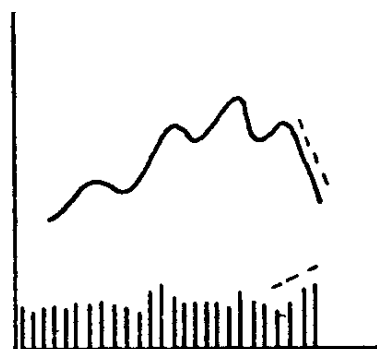


Figure D

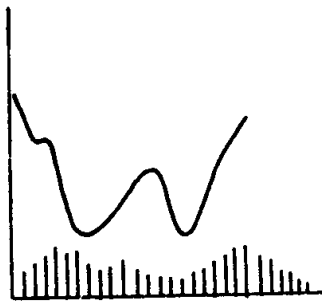


Figure E

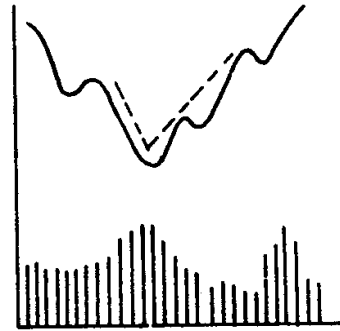


Figure G

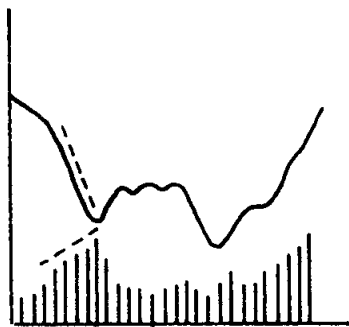


Figure F

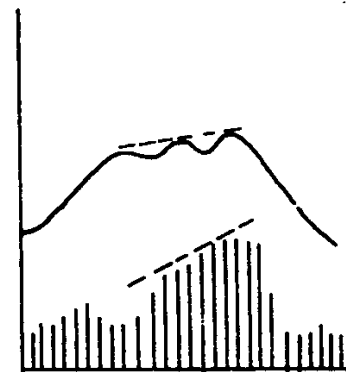


Figure H

Part E : Applied Theory Caselet I

6. There are numerous criteria based on which such stocks can be selected. A few of them are:
 - a. Increase in a company's earnings at faster rate than in the past
 - b. A positive forecast of earnings of a company by analysts
 - c. A better than anticipated performance in terms of earnings
 - d. The rate of increase of the share price of a company being higher than the rate at which the market rises.

7. Growth investing involves fundamental analysis of a company to decide on its investment worthiness. Then the technical of the company are studied to decide on the timing of the buying or selling of the stock. In other words, growth investing involves a blend of fundamental analysis with technical analysis for making investment decisions. Momentum investing, in contrast, focuses mostly on the technicals and little on the fundamentals. It is primarily a short-term investing while growth investing is for the long term and is in its essence an exercise in reading the current market mood, with the objective of gaining from the price movements. While growth investing is also concerned with the dividends and other forms of returns from investing in stocks, momentum investing is not.

8.
 - a. Risk of loss due to a shift in the trend – either the trend not being in the direction anticipated or not being to the extent anticipated – is very high
 - b. As it involves frequent buying and selling to keep up with the market moods, transaction costs can be high.
 - c. The above two factors together increase the possibility of losing the capital available for investing in a short time. With momentum investing, steep and quick changes in wealth are highly likely.

Caselet 2

9. Using a stock in the place of an index is always more risky. This is because, the speculator has a view on the index, not on the stock. But, it is not practically possible to buy an index in the absence of index futures. So he identifies a stock which he thinks resembles the movement of the index closely. But the movement of the stock may not coincide with the movement of the index identically - this may result in the actual outcome being different from the expected outcome. Therefore the risk is higher.
10. Hedging stock position with another position in index futures is possible only when the gains from the underlying position can be expected to be more than the losses from the hedge or the losses from the underlying position will be less than the gains from the hedge. If a long position is taken in a stock, a price rise results in a profit and a fall results in a loss. The same applies to a long position in index futures. The position to be taken also depends on the extent of correlation between the prices of the stock and the index.

Caselet 3

11. In this segment (retail finance) there are significant entry barriers. Economies of scale are high. But, because of the large size of banks and FIs, the economies of scale do not cause problems to them. Access to funds at a cheaper cost can also act as an entry barrier. But, both banks and FIs have access to funds at a lower cost than NBFCs. There is no proprietary technology involved, as financial services in India are not yet technology intensive. The same applies to product differentiation – there is not much differentiation or brand equity involved in the financial services industry in India - particularly in the retail segment.
12. The major factors are as follows:
 - a. Default by customers: If the borrowers do not pay up their loans and the entire amount cannot be recovered from them for any reason, it results in a loss
 - b. Mismatch of inflows and outflows: Finance companies normally borrow for shorter periods and lend for longer periods. This can cause a liquidity crisis.
 - c. Changes in interest rates: If interest rates fall after funds are raised or rise after lending at a fixed rate, there is a clear possibility of suffering losses.