

Question Paper

Security Analysis - II (MSF2D2) : October 2007

Section D : Case Study (50 Marks)

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

Case Study

Read the case carefully and answer the following questions:

1. Perform environmental analysis on Indian Gem and Jewellery Industry using Porter's Model. (10 marks) [Answer](#)
2. Analyse the strengths, weaknesses, opportunities and threats of Gitanjali Gems Limited. (10 marks) [Answer](#)
3. Mr. Souvick is willing to buy the shares of Gitanjali Ltd. and is seeking your advice for the same. The dividend of the company is expected to increase at 65% p.a for the next five years and will be stabilized at 15% p.a. thereafter. Beta of the company is expected to decrease linearly to 1.04 from the current level during next six years. The yield of 91day T-bill is 7% p.a. and expected return on Nifty is 18% p.a. You are required to advice Mr. Souvick. (10 marks) [Answer](#)
4. Mr. Prashant Shah has bought 100 shares of Gitanjali Gems Ltd. at a price of Rs.210.00 (excluding brokerage). He has adopted the strategy of buying/selling 50 shares of the company at every crossover. The brokerage is 0.75% and 0.50% respectively for buying and selling the shares. Current market price of the share of the company is Rs.206. Analyse whether his strategy has worked for him or buy and hold strategy would have been the better option. (10 marks) [Answer](#)
 - Refer to the chart given in the case study.
5. Mr. Prashant Shah, an analyst, says that ROC is a momentum indicator that measures velocity and also leads the price action. He has provided you with the following model to calculate ROC: (10 marks) [Answer](#)

$$\text{ROC} = ((\text{Today's close} - \text{Close } n \text{ periods ago}) / (\text{Close } n \text{ periods ago})) \times 100$$

Calculate 12 month ROC for Mr. Prashant Shah and interpret the same with the diagram.

Indian Gems and Jewellery Industry

Overview

The diamond manufacturing industry in India has traditionally been one of the largest components of the global trade in diamonds. Until the 18th century, India was the only known source of diamonds in the world. India occupies a prominent place in the global diamond industry and has established its position as the largest exporter of cut and polished diamonds in the world. The gems and jewellery industry is also a critical constituent of the Indian economy with gems and jewellery forming the single largest component of merchandise exports in the country.

The primary function of Gems and Jewellery (GJ) is to decorate and adorn. However, demand for different types of GJ is influenced by several factors including buyer preferences, properties, varieties, unit values, application, etc. The GJ sector may be further categorised into the following sub-sectors based on characteristics, processing techniques, preciousness in terms of price range and marketability.

1. Gemstones
 - Diamonds
 - Coloured Stones-precious, semi-precious, synthetic
2. Jewellery
 - Plain gold Jewellery
 - Studded Jewellery
 - Silver Jewellery
 - Costume Jewellery
3. Pearls

Preference for gold dominates the domestic jewellery demand. The domestic demand for gold jewellery was estimated at Rs.390 billion in 2005, accounting for an estimated 80% of the Indian jewellery market of Rs.490 billion. The balance comprises diamond jewellery (Rs.80 billion), and other fabricated jewellery (Rs.20 billion).

Importance to Economy

The GJ industry has an important role in the Indian economy. While a predominant portion of gold jewellery manufactured in India is for domestic consumption, a predominant portion of rough, uncut diamonds processed in the form of either polished diamonds or finished diamond jewellery is exported. With an estimated consumption of 722 tonnes during calendar year or CY2005 (including jewellery consumption of 587 tonnes), India is the largest consumer of gold in the world. India is also estimated to hold nearly 14,000 tonnes of gold, accounting for nearly 9% of the world's cumulative mine production. Apart from its historical religious significance, gold is valued as an important savings and investment vehicle.

The GJ industry also contributes around 15% of India's exports. As the table below shows, exports of GJ aggregated Rs.688.30 billion (US\$15.55 billion) during FY2006, accounting for 15.1% of India's total exports. Since minor year-on-year variations, the share of GJ in India's exports has grown over time from 4% in 1972-73.

FY	Exports - billion		% of total exports	Imports - billion		% of total imports	Trade Balance - billion	
	Rs.	US\$		Rs.	US\$		Rs.	US\$
1973	0.79	0.10	4.0%	0.42	0.05	2.2%	0.37	0.05
1995	141.31	4.50	17.1%	51.17	1.63	5.7%	90.14	2.87
1996	176.44	5.27	16.6%	70.45	2.11	5.7%	106.00	3.17
1997	168.72	4.75	14.2%	103.84	2.93	7.5%	64.88	1.83
1998	198.67	5.35	15.3%	124.21	3.34	8.1%	74.46	2.00
1999	249.45	5.93	17.8%	158.20	3.76	8.9%	91.25	2.17
2000	325.09	7.50	20.4%	235.56	5.44	10.9%	89.54	2.07
2001	337.33	7.38	16.6%	219.63	4.81	9.5%	117.70	2.58
2002	348.45	7.31	16.7%	220.45	4.62	9.0%	128.00	2.68
2003	437.01	9.03	17.1%	293.41	6.06	9.9%	143.68	2.97
2004	485.86	10.57	16.6%	327.57	7.13	9.1%	158.29	3.44
2005	618.34	13.76	16.5%	423.38	9.42	8.4%	194.96	4.34
2006	688.30	15.55	15.1%	404.69	9.14	6.4%	283.61	6.41

The Indian GJ industry is also a major earner of foreign exchange, with a trade surplus of Rs.283.61 billion (US\$6.41 billion) during FY2006, as compared with an overall trade deficit of Rs.1,757.27 billion (US\$39.69 billion). The GJ industry has contributed significantly to the shift in India's exports. They along with chemicals and allied products, engineering goods, ready-made garments, textile yarn, fabrics, made-ups have been the main drivers within the manufactured product exports during the last decade.

With the increase in exports in recent years, the GJ industry has also accounted for an increased share of Gross Bank Credit (GBC) of scheduled commercial banks (SCBs). With GBC of Rs.198.66 billion in March 2006, the industry accounted for 3.61% of industry GBC of SCBs in March 2006, as compared with 2.7% in March 2000.



As shall be discussed below, India is the largest diamond cutting & polishing centre in the world, followed by Israel. The bulk of the GJ industry in India is concentrated in the unorganised sector and employs an estimated 2 million workers serving over 0.45 million goldsmiths, and around 0.1 million diamond processing units. The majority of India's diamond workforce is employed by small units that process diamonds on a job-lot basis. The number of gold jewellery manufacturing units is put at 0.1 million. Also, a large number of skilled goldsmiths/ gold merchants from India are engaged in gold trade and industry in almost all the oil-rich Middle Eastern countries.

Demand for India Jewellery

Domestic Gold Jewellery:

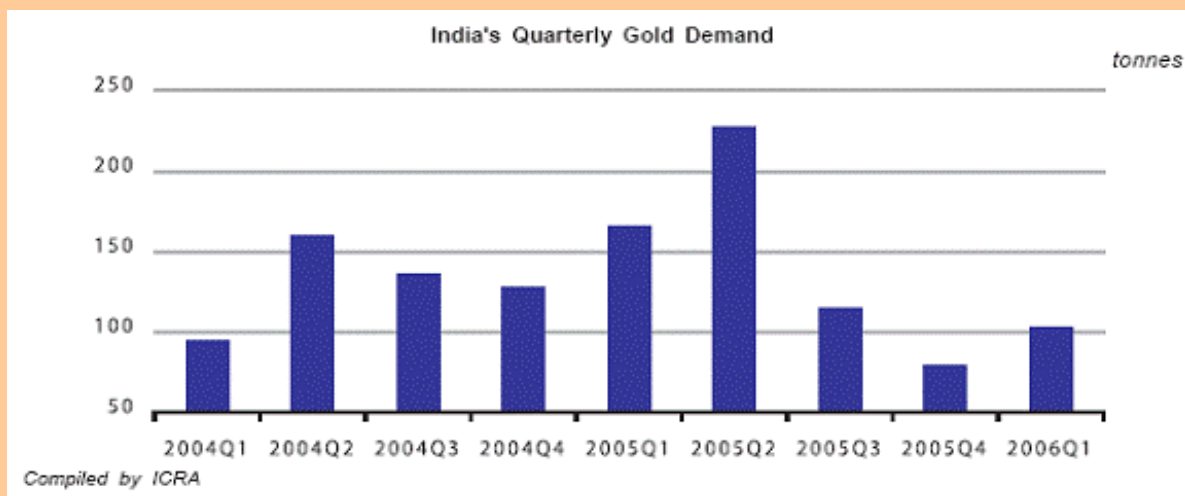
From historic times, gold has played a pivotal role in the Indian social fabric. Even in present times, gold remains the Indian bride's "Streedhan", the wealth she takes with her when she marries and which remains hers. Gold jewellery is the preferred jewellery worn by women in India irrespective of their religious beliefs. In marriages, gold jewellery is the gift preferred by the near relatives of the bride and the groom. Gold jewellery is very popular among farmers, with an upsurge in gold sales after a good agricultural season. Buying of gold is an important part of every stage of an Indian citizen's life-at birth, marriage, construction of home, festivals, religious ceremonies, setting up of new business, and death. Apart from its religious and social significance, gold is valued as an important savings and investment vehicle in India and is the second preferred investment behind bank deposits.

Apart from its historical religious significance, gold circulates within the system and roughly 30% of gold jewellery fabrication is from recycled pieces. With an estimated consumption of 722 tonnes during 2005 (including jewellery consumption of 587 tonnes), India is the largest consumer of gold in the world.



India is also estimated to hold nearly 14,000 tonnes of gold, accounting for 9% of the world's cumulative mine production of around 153,000 tonnes. India is typically also the largest purchaser of coins and bars for investment.

India's gold jewellery demand is seasonal with the highest consumption during the festival and wedding season.



Domestic Diamond Jewellery

In the diamond business, Indian companies are mostly present at the 'Beneficiate' level of the value chain where they are engaged in importing rough diamonds (or 'roughs') from mining companies, cutting and polishing roughs, and exporting them for further consumption in jewellery, etc.

The Indian domestic diamond jewellery market is estimated at around Rs.80 billion per annum in retail value. The demand for jewellery is dependent on India's Gross Domestic Product's (GDP's) growth, which is expected to be high in the near future. Although accurate and official data is not available, while China ranks sixth in the world in terms of diamond jewelry retail value, ahead of India which is in seventh place, India ranks third in terms of diamond value, while China holds the seventh position. Because of increased disposable income and aggressive promotion strategies by the diamond industry, Indian diamond jewellery demand has increased significantly in recent years-from Rs.19.7 billion in 1995 to around Rs.80 billion in 2005. The diamond content in the retail value has remained stable at around 71%. In 1992, a poll conducted by the Diamond Trading Corporation (DTC) examined the buying preferences of Indian women in its ideal target market, and discovered that only 10% of the women surveyed described diamonds as their preferred type of jewellery. By comparison, gold was preferred by 67% of the women surveyed. Since then, the situation has changed considerably, in part because of an industry-led consumer advertising campaign. A study similar to one carried out in 1992 was conducted in 2002. The survey showed that 43% of the women in the same socio-economic groups identified diamonds jewellery as their first preference, compared with 34% for gold jewellery.

Domestic Branded Jewellery

Branded jewellery has been a relatively recent phenomenon in India, with most jewellery retailed in the unorganised sector. The majority of traditional jewelers cater to the local population and most purchases are made on trust and on the basis of the reputation of the local jeweler.

Tanishq and Gili were among the earliest jewellery brands in India. The branding of jewellery in India follows the pattern in the international market

where 90% of the jewellery is sold as a fashion accessory or as everyday wear and not as an investment. Branded jewellery is therefore positioned as a lifestyle and personality statement. There has also been a shift in consumer preference towards diamond jewellery due to the extensive positioning of diamond jewellery as both affordable and contemporary.

Another key development in branded jewellery has been the introduction of value added services such as the certification of gold and diamonds, and life time return and buy-back schemes. These trade practices have resulted in the perception of superior quality associated with branded jewellery. The new generation of jewellery purchasers does not have ongoing relationships with local jewelers and prefers to buy branded jewellery.

Retailing Formats for Branded Jewellery in India

There are broadly three retail formats followed by branded jewelers in India:

- Exclusive outlets at malls and other key shopping centers in major cities showcasing various models of the brand;
- Kiosks/displays in departmental stores and malls; and
- Display of branded jewellery in shops of local jewelers.

Government Support for the Gems and Jewellery Industry in India

The Government of India has taken initiatives to stimulate the growth of the gems and jewellery industry given the industry's critical importance in Indian exports. Some initiatives taken by the Government to benefit the gems and jewellery industry include duty free imports of rough diamonds and the waiver of customs duty on coloured, rough gemstones and semi-processed, half-cut and broken diamonds.

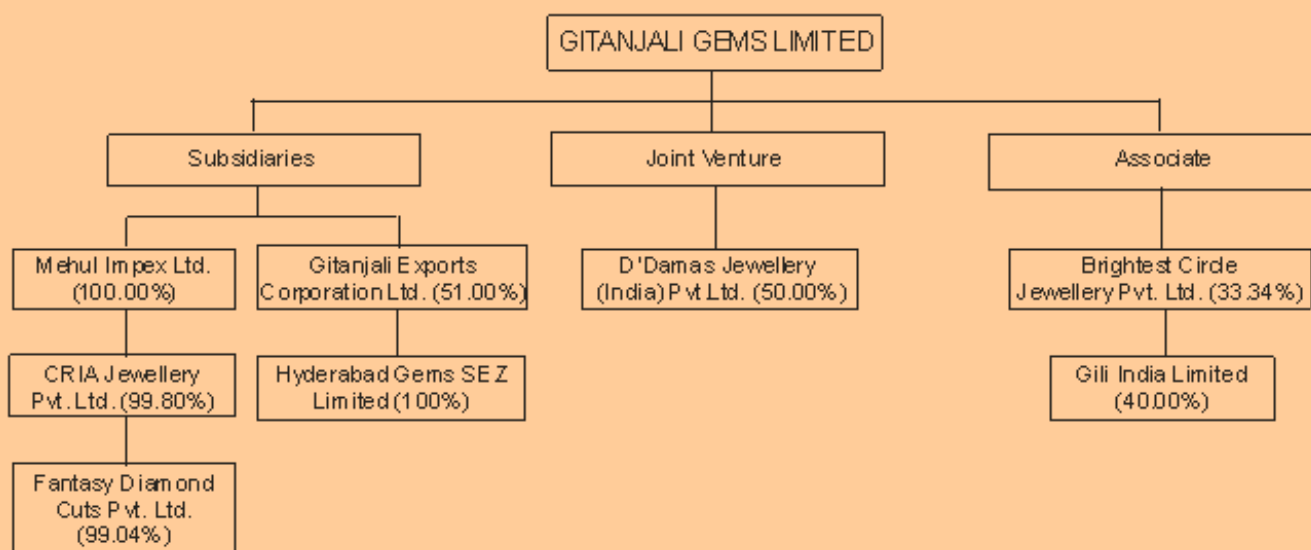
The EXIM policy for 2002-07 contains special focus on exports of gems and jewellery through market access initiative schemes, duty free imports and appropriate adjustments in value addition norms. There has also been a reduction of import tariff on cut and polished diamonds and gemstones from 15% to 5%, which has enabled Indian jewelers to import expensive, large-size diamonds and export them after value addition through the manufacture of studded jewellery.

Gitanjali Gems Limited

Corporate History and Structure

The Company was originally incorporated on August 21, 1986 as a private limited company and became a deemed public limited company pursuant to Section 43A of the Companies Act, 1956, as amended, with effect from August 2, 1991. The Company was subsequently converted into Gitanjali Gems Limited, a public limited company pursuant to a certificate of change of name dated December 8, 1994.

The company has five subsidiaries, one joint venture company and two associate companies, as specified below:



Mr. Mehul C. Choksi, aged 46 years, is the Company's Chairman and Managing Director. Mr. Choksi obtained a Bachelor's degree in Commerce and has been associated with the diamond industry for the last 28 years. The group commenced its operations through formation of partnership firm known as Gitanjali Exports Corporation in 1966 by Mr. Choksi's father Late Chinubhai Choksi. Mr. Mehul C. Choksi joined the group in the year 1981. Later on in 1986 he established Gitanjali Gems Pvt Ltd, the flagship company of the group. He has been instrumental in launching successful brands like GILI, D'Damas and Giantti and has also played a very important role in positioning the brands Nakshatra and Asmi in India. He has wide experience in the diamond industry and has been in charge of buying rough diamonds, sales of polished goods to customers and has pioneered the use of corporate practices in the Indian jewellery industry. Mr. Choksi has been on the committee of the Export Promotion Council from time to time and is primarily responsible for all the expansion and diversification plans of the group.

Business

The company is an integrated diamond and jewellery manufacturing company and one of the largest manufacturers and retailers of diamonds and jewellery in India. The company's operations include sourcing of rough diamonds from primary and secondary source suppliers in the international market, cutting and polishing the rough diamonds for export to its international markets and the manufacture and sale of diamond and other jewellery through company's retail operations in India as well as in international markets.

Diamond procurement, manufacturing and sales:

The company procures a significant part of our rough diamonds at competitive prices from DTC, the rough diamond marketing arm of De Beers S. A., through Digico Holdings Limited, one of its Promoter group companies that enjoys a "sightholder" status with DTC. It has, either directly or

through its Promoter group companies, enjoyed sightholder status with DTC for more than three decades. The company sources its remaining rough diamond requirements from secondary source suppliers in the international market.

The company exports cut and polished diamonds to various international markets in Europe including to Antwerp and Italy, the United States, the Middle East as well as to several diamond and jewellery markets in Asia including Japan, China, Hong Kong and Thailand. The company has two modern diamond manufacturing facilities located at Borivali in Mumbai and at the Special Economic Zone in Surat in the state of Gujarat. The company's diamond cutting and polishing facility at Borivali is spread over an area of 40,000 square feet with modern diamond processing equipment, employs more than 1,200 skilled employees and is one of the largest diamond manufacturing facilities in India. Its facility at Surat is an export oriented facility aimed at export markets.

Jewellery manufacturing and sales

The company has a sophisticated 80,000 square feet jewellery designing and manufacturing facility for diamond studded jewellery at the Santacruz Electronic Export Processing Zone ("SEEPZ") at Andheri, Mumbai that employs more than 800 employees. This 100% export oriented facility also produces gold and platinum diamond studded jewellery. The company also has two modern jewellery manufacturing facilities at MIDC at Andheri, Mumbai that primarily produces branded jewellery lines for retail operations in India. The company intend to set up additional diamond and jewellery manufacturing facilities at Mumbai and at the proposed Gems and Jewellery Special Economic Zone ("GJSEZ") in Hyderabad.

We sell our branded diamond and other jewellery products in India through our nationwide sales and distribution network that as of September 30, 2005 consisted of 26 exclusive distributors across India, approximately 620 outlets, including outlets in host stores, 5 stand alone stores and 17 stores set up through franchisee arrangements spread across 30 cities and towns in India. Our strong marketing and distribution network also benefits from the operations of our Promoter group companies outside India involved in the diamond and jewellery business. We have a large customer base spread across India and international markets that includes various jewellery manufacturers, large department store chains, retail stores and wholesalers.

Branded jewellery

The company's branded jewellery lines were among the first branded jewellery products introduced in India. Its brands and sub-brands are aimed at different customer profiles, various markets and price segments and for various uses and occasions and enjoy significant brand equity and market share in their respective market segments. According to the July 2005 edition of Solitaire International, a publication of the Gem and Jewellery Export Promotion Council of India, four of the brands under which we sell branded jewellery, Nakshatra, Asmi, Gili and D'Damas, feature among the ten best known jewellery brands in India. The company's first jewellery brand Gili was selected as a "Superbrand" in 2004 by the Indian Consumer Superbrands Council established by Superbrands India Private Limited, an independent arbiter in branding.

As of September 30, 2005, we had more than 2,300 employees including contract employees, of which more than 1,800 employees were employed at our manufacturing facilities and more than 250 employees were employed in our retail operations.

The company's strategies:

- Further increase our market share in the diamonds and jewellery businesses in India.
- Continue to maintain focus on our international markets.
- Continue to further develop our branded jewellery lines.
- Continue to expand our retail operations.
- Continue to expand our product offerings and maintain high quality customer service.
- Increase our production capacities and revenues and harness inherent synergies of our integrated operations.
- Pursue strategic acquisitions and alliances.

Income Statement of Gitanjali Gems Ltd. for the year ending on 31st

(Rs. in Crore)

	0603-(12)	0503-(12)	0403-(12)	0303-(12)	0203-(12)
Income :					
Operating Income	1,621.26	1,353.84	1,306.11	1,172.08	1,027.11
Expenses:					
Material Consumed	1,446.32	1,262.11	1,227.17	1,105.66	963.64
Manufacturing Expenses	65.87	51.44	34.73	10.00	7.31
Personnel Expenses	5.65	1.23	0.88	0.68	0.74
Selling Expenses	1.85	3.16	3.59	0.00	0.00
Administrative Expenses	10.77	3.07	3.44	8.15	8.66
Expenses Capitalized	0.00	0.00	0.00	0.00	0.00
Cost Of Sales	1,530.46	1,321.01	1,269.81	1,124.50	980.35
Operating Profit	90.80	32.83	36.30	47.58	46.76
Other Recurring Income	0.75	0.02	0.29	0.31	4.18
Adjusted PBDIT	91.55	32.85	36.58	47.89	50.94
Financial Expenses	35.41	18.79	21.21	27.77	28.43
Depreciation	1.84	0.42	0.46	0.53	0.61
Other Write offs	0.00	0.00	0.00	0.00	0.00
Adjusted PBT	54.30	13.64	14.91	19.60	21.90
Tax Charges	6.36	5.26	2.84	1.14	0.00
Adjusted PAT	47.94	8.38	12.07	18.46	21.90

Equity Dividend	5.90	0.00	0.00	0.00	0.00
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Balance Sheet of Gitanjali Gems Ltd. as at 31st

(Rs. in Crore)

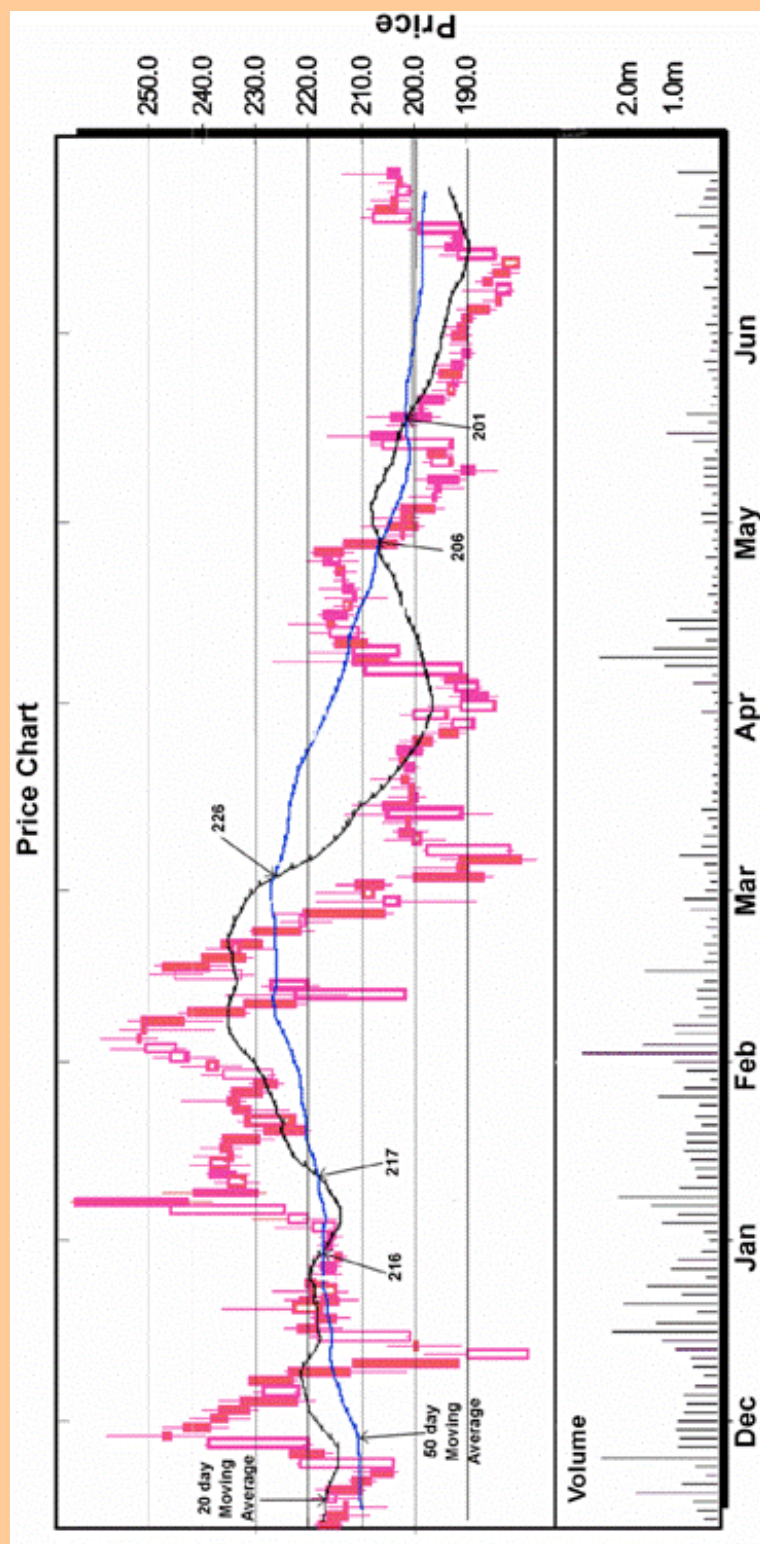
	0603-(12)	0503-(12)	0403-(12)	0303-(12)	0203-(12)
SOURCES OF FUNDS					
Owner's Fund					
Equity Share Capital	59.00	30.01	30.01	30.01	30.00
Share Application Money	0.00	0.00	0.00	0.00	0.00
Preference Share Capital	0.00	0.00	0.00	0.00	0.00
Reserves & Surplus	649.46	216.71	207.95	194.27	177.87
Loan Funds					
Secured Loans	479.84	313.81	299.16	277.77	253.49
Unsecured Loans	1.24	0.00	0.85	0.53	0.50
Total	1,189.54	560.53	537.97	502.58	461.86

USES OF FUNDS					
Fixed Assets					
Gross Block	32.21	14.13	14.02	13.84	13.78
Less : Revaluation Reserve	0.00	0.00	0.00	0.00	0.00
Less : Accumulated Depreciation	11.86	4.58	4.15	3.71	3.18
Net Block	20.35	9.55	9.86	10.13	10.60
Capital Work-in-progress	0.26	0.10	0.00	0.00	0.00
Investments	23.54	3.07	3.07	3.07	2.99
Net Current Assets					
Current Assets, Loans & Advances	1,477.64	752.27	687.82	668.15	686.10
Less : Current Liabilities & Provisions	332.25	204.46	162.78	178.76	237.84
Total Net Current Assets	1,145.39	547.81	525.04	489.39	448.26
Miscellaneous expenses not written off	0.00	0.00	0.00	0.00	0.00
Total	1,189.54	560.53	537.97	502.59	461.85

Note: Face value of each share of the company is Rs.10.

Price of Gitanjali Gems Ltd. on NSE:

June 2006		June 2007		
Trading Day	Closing Price (Rs.)	Trading Day	Closing Price (Rs.)	NSE Nifty Value
1	203.70	1	190.55	—
2	195.40	2	189.35	—
3	190.75	3	190.85	—
4	182.45	4	189.90	—
5	158.85	5	190.10	—
6	128.65	6	188.95	—
7	154.40	7	185.55	—
8	154.90	8	184.40	—
9	128.45	9	184.55	4145.00
10	114.20	10	185.10	4145.60
11	133.45	11	181.80	4155.20
12	143.90	12	183.25	4113.05
13	145.55	13	191.70	4170.00
14	151.50	14	190.70	4171.45
15	159.40	15	190.40	4147.10
16	163.90	16	198.95	4214.30
17	163.30	17	207.55	4248.65
18	178.60	18	203.05	4267.40
19	166.55	19	202.85	4252.05
20	161.40	20	203.15	4259.40
21	146.70	21	203.10	4285.70
22	146.40	22	205.00	4263.95
23	141.95	23	198.75	4282.00



END OF SECTION D

Section E : Caselets (50 Marks)

- This section consists of questions with serial number 6 - 11.
- Answer **all** questions.
- Marks are indicated against each question.
- Do not spend more than 80 - 90 minutes on Section E.

Caselet 1

Read the caselet carefully and answer the following questions:

6. With respect to the caselet, discuss the functions of securities markets.

(8 marks)

[Answer](#)

7. The caselet says that financial markets finance economic growth. Explain how securities markets lead to economic growth.

(8 marks)

[Answer](#)

It is needless to say that the financial markets finance economic growth. They canalize savings to investments and thereby decouple these two activities. As a result, savers and investors are not constrained by their individual abilities, but by the economy's ability to invest and save respectively, which inevitably enhances savings and investment in the economy. To the extent the growth of an economy depends on the rate of savings and investment, financial markets promote economic growth.

The banks and securities markets are two competing mechanisms in financial markets to channel savings to investment. The securities markets score over banks in the allocational efficiency, as it allocates savings to those investments which have potential to yield higher returns. This inevitably leads to higher returns to savers on their savings and higher productivity on investments to enterprises. Hence to the extent economic growth depends on the rate of return on investments, securities market promotes economic growth.

The more liberalized a securities market is, the better is its impact on economic growth. Interventions in the securities market were originally designed to help governments expropriate much of the seigniorage and control and direct the flow of funds for favoured uses. These helped governments to tap savings on a low or even no-cost basis. In some economies, governments used to allocate funds from the securities market to competing enterprises and decide the terms of allocation. The result was channelisation of resources to favoured uses rather than sound projects. In such circumstances, accumulation of capital per se meant little, where rate of return on some investments were negative while extremely remunerative investment opportunities were foregone. This kept the average rate of return from investment lower than it would otherwise have been and, given the cost of savings, the resulting investment was less than optimum.

There are benefits associated with the existence of a securities market. First, the securities market provides a fast-rate breeding ground for the skills and judgment needed for entrepreneurship, risk bearing, portfolio selection and management. Second, an active securities market serves as an 'engine' of general financial development and may, in particular, accelerate the integration of informal financial systems with the institutional financial sector. Securities directly displace traditional assets such as gold and stocks of produce or, indirectly, may provide portfolio assets for unit trusts, pension funds and similar FIs that raise savings from the traditional sector. Third, the existence of securities market enhances the scope, and provides institutional mechanisms, for the operation of monetary and financial policy.

END OF CASELET 1

Caselet 2

Read the caselet carefully and answer the following questions:

8. With respect to the caselet, explain what an efficient market is. And also analyse whether a particular market can be completely efficient or completely inefficient with suitable explanation.

(9 marks)

[Answer](#)

9. From the given caselet, it can be interpreted that weak form of market efficiency challenges the very basis of technical analysis, semi-strong form of market efficiency challenges fundamental analysis and strong form of market efficiency challenges even the insider information. Explain with suitable arguments.

(9 marks)

[Answer](#)

The paradox of efficient markets is that if every investor believed a market was efficient, then the market would not be efficient because no one would analyze securities. In effect, efficient markets depend on market participants who believe the market is inefficient and trade securities in an attempt to outperform the market.

An issue that is the subject of intense debate among academics and financial professionals is the Efficient Market Hypothesis (EMH). The Efficient Market Hypothesis states that at any given time, security prices fully reflect all available information. The implications of the efficient market hypothesis are truly profound. Most individuals that buy and sell securities (stocks in particular), do so under the assumption that the securities they are buying are worth more than the price that they are paying, while securities that they are selling are worth less than the selling price. But if markets are efficient and current prices fully reflect all information, then buying and selling securities in an attempt to outperform the market will effectively be a game of chance rather than skill.

The Efficient Market Hypothesis evolved in the 1960s from the Ph.D. dissertation of Eugene Fama. Fama persuasively made the argument that in an active market that includes many well-informed and intelligent investors, securities will be appropriately priced and reflect all available information. If a market is efficient, no information or analysis can be expected to result in out performance of an appropriate benchmark.

The random walk theory asserts that price movements will not follow any patterns or trends and that past price movements cannot be used to predict future price movements. Much of the theory on these subjects can be traced to French mathematician Louis Bachelier whose Ph.D. dissertation titled "The Theory of Speculation" (1900) included some remarkably insights and commentary. Bachelier came to the conclusion that "The mathematical expectation of the speculator is zero" and he described this condition as a "fair game." Unfortunately his insights were so far ahead of the times that they went largely unnoticed for over 50 years until his paper was rediscovered and eventually translated into English and published in 1964.

The debate about efficient markets has resulted in hundreds and thousands of empirical studies attempting to determine whether specific markets are in fact "efficient" and if so to what degree. Many novice investors are surprised to learn that a tremendous amount of evidence

supports the efficient market hypothesis. Early tests of the EMH focused on technical analysis and it is chartists whose very existence seems most challenged by the EMH. And in fact, the vast majority of studies of technical theories have found the strategies to be completely useless in predicting securities prices. However, researchers have documented some technical anomalies that may offer some hope for technicians, although transactions costs may reduce or eliminate any advantage.

The biggest part of fundamental analysis involves delving into the financial statements. Also known as quantitative analysis, this involves looking at revenue, expenses, assets, liabilities and all the other financial aspects of a company. Fundamental analysts look at this information to gain insight on a company's future performance. This analysis is not profitable in market which is efficient in semi-strong form. When the market is efficient in its strong form, even insider information is not profitable.

END OF CASELET 2

Caselet 3

Read the caselet carefully and answer the following questions:

- 10.** The caselet says that through careful planning an investor can manage the risk. Discuss the various strategies an investor can adopt to manage his risk with the potential of returns.

(8 marks)

[Answer](#)

- 11.** Most investors are aware that you must take greater risks to achieve higher returns. However, no one wants to take more risk than necessary to achieve one's financial goals. Diversification can help reduce risk. But diversification also has the limitations attached with it. Explain the limitation of diversification with suitable explanation.

(8 marks)

[Answer](#)

Risk – Just the thought of it can give investors sleepless nights. However, through careful planning for your financial future, you can help manage risk.

Risk is something you encounter everyday. Even crossing a busy street involves some risk. With investments, balancing risk and return can be a tricky operation. All investors want to maximize their return, while minimizing risk. Let's face it, putting your hard earned money on the line can be downright frightening.

Some investments are certainly more "risky" than others, but no investment is risk free. Trying to avoid risk by not investing at all can be the riskiest move of all. That would be like standing at the curb, never setting foot into the street. You'll never be able to get to your destination if you don't accept some risk. In investing, just like crossing that street, you carefully consider the situation, accept a comfortable level of risk, and proceed to where you're going. Risk can never be eliminated, but it can be managed.

Most investors find it difficult to diversify effectively across the full spectrum of cash and individual stocks and bonds. That is why so many investors have chosen variable products to apply the strategies previously mentioned. Mutual funds, variable annuities, variable universal life insurance products offer the potential for maximizing investment performance, investment flexibility, and convenience. They allow you to allocate investments among several asset categories to tailor the mix to suit your needs. In addition they offer professional investment management, and allow you to leave the day-to-day decisions to the "experts." Of course, like any investment, these products involve risk and you should read prospectus carefully to see if they are right for you before investing.

An old proverb states, "The best time to plant a tree was yesterday. The second best time to plant a tree is today." This "power of time" concept applies to personal finance as well. The sooner you implement your investment plan, the greater the wealth you can potentially accumulate. In addition, the longer your time horizon, the easier it is to ride out the ups and downs of your investments. The length of time investors hold onto their portfolios is one of the crucial factors determining the likelihood of obtaining a positive return. Financial history indicates that investors are amply rewarded in the long-term for assuming risk. Regrettably there's no magic potion for eliminating risk. But by carefully creating a long-term, diversified investment program you can help manage risk.

END OF CASELET 3

END OF SECTION E

END OF QUESTION PAPER

Suggested Answers
Security Analysis - II (MSF2D2) : October 2007
Section D : Case Study

1.Environmental Analysis—Porter’s Model

Force-1	Remark
Barriers to entry:	Low to Medium
Reason	Low capital requirements, but skilled manpower is essential. Ability to invest in more advanced technology is becoming increasingly critical. As well as the access to the resources is also very critical. Access to the distribution channel is very much required.

Force-2	Remark
Bargaining Power of Buyers:	Low to Medium
Reason	Bargaining power in gold jewellery is limited to fabrication charges. In diamond cutting and polishing, the bargaining power of buyers arises from the fact that a majority of the world's rough diamond production is cut and polished in India. As India has expertise in diamond production and polishing, the bargaining power of buyers is low to medium

Force-3	Remark
Bargaining Power of Suppliers:	Medium
Reason	With negligible domestic production of gold and gemstones, India relies largely on imports. Bargaining power of suppliers is enhanced by the fact that India is the largest consumer of gold. In rough diamonds, the major global suppliers have very few alternative customers (cutting and polishing) for their cheaper range of roughs.

Force-4	Remark
Threat of Substitutes:	Low
Reason	From historic times, gold has played a pivotal role in the Indian social fabric. Gold is valued in India as a savings and investment vehicle and is the second preferred investment behind bank deposits. Gold is also the preferred metal in jewellery. Domestic diamond jewellery demand is low, but increasing at a high rate because of higher incomes and aggressive marketing strategies.

Force-5	Remark
Inter-Firm Rivalry :	High
Reason	Bulk of the industry in India is concentrated in the unorganized sector and employs around 1.5 million workers serving over 0.2 million gold jewelers and over 8,000 diamond jewelers. The majority of India's diamond workforce is employed by small units that process diamonds on a job-lot basis. However, the share of the unorganized sector has declined in recent years.

2.Strengths:

- The company is an integrated diamond and jewellery company in India having an international presence
- Sight holder status with DTC and access to other primary source diamond suppliers
- Significant manufacturing capabilities
- Strong brand equity
- Highly qualified and motivated employee base and proven management team
- Strong marketing and distribution network
- Broad range of certified diamond and jewellery products

Weaknesses:

- The company experienced negative cash flows in the past
- The company has high working capital requirements. If it experiences insufficient cash flows to meet required payments on debt and working capital requirements, there may be an adverse effect on its results of operations
- The company's insurance may not be adequate to protect against all potential losses to which it may be subject.

Opportunities:

- Further increase in the company's market share in the diamonds and jewellery businesses in India due to growth in GDP.
- Continue to maintain focus on international markets.
- Continue to further develop branded jewellery lines.
- Continue to expand retail operations.

- Continue to expand product offerings and maintain high quality customer service.
- Pursue strategic acquisitions and alliances.

Threats:

- A decrease in the availability or an increase in the price of diamonds may make it difficult for the company to procure enough diamonds at competitive prices to supply its customers.
- The company's business is dependent on a continuing relationship with our customers.
- The company face significant competition in business from Indian and international diamond and jewellery manufacturing and retailing companies.
- If the company is unable to accurately manage inventory of fine jewellery, its reputation and results of operations could suffer.
- The company is subject to seasonal fluctuations in sales.
- The Company is involved in certain tax related disputes that, if determined against the Company, could have a material adverse impact on the Company.
- There are certain legal proceedings against the Company's Directors, Promoters and group companies.

[< TOP >](#)

3.

Price of the share of Gitanjali (Amt. in Rs.)	Value of Nifty					() ()	
184.55	4145.00						
185.1	4145.60	0.298	0.014	-0.259	-0.221	0.057	0.049
181.8	4155.20	-1.783	0.232	-2.340	-0.003	0.007	0.000
183.25	4113.05	0.798	-1.014	0.241	-1.249	-0.300	1.560
191.7	4170.00	4.611	1.385	4.054	1.150	4.662	1.322
190.7	4171.45	-0.522	0.035	-1.079	-0.200	0.216	0.040
190.4	4147.10	-0.157	-0.584	-0.714	-0.819	0.585	0.671
198.95	4214.30	4.491	1.620	3.934	1.385	5.449	1.918
207.55	4248.65	4.323	0.815	3.766	0.580	2.184	0.336
203.05	4267.40	-2.168	0.441	-2.725	0.206	-0.561	0.042
202.85	4252.05	-0.098	-0.360	-0.655	-0.595	0.390	0.354
203.15	4259.40	0.148	0.173	-0.409	-0.062	0.025	0.004
203.1	4285.70	-0.025	0.617	-0.582	0.382	-0.222	0.146
205	4263.95	0.935	-0.508	0.378	-0.743	-0.281	0.552
198.75	4282.00	-3.049	0.423	-3.606	0.188	-0.678	0.035
	Total	7.802	3.289			11.533	7.029
	Mean	0.557	0.235				

Now Beta = $11.533/7.029 = 1.64$ No of equity shares = $59/10 = 5.9$ crore

Dividend = 5.9 cr.

DPS = 1 Re.

Year	Growth rate	DPS	Beta	Ke
0		1	1.64	
1	1.65	1.65	1.54	23.94
2	1.65	2.72	1.44	22.84
3	1.65	4.49	1.34	21.74
4	1.65	7.41	1.24	20.64
5	1.65	12.23	1.14	19.54
6	1.15	14.06	1.04	18.44

*Terminal value = $14.06/(0.1844-0.15) = \text{Rs.}408.72$ Value of the share = $1.65/1.2394 + 2.72/(1.2394 \times 1.2284) + 4.49/(1.2394 \times 1.2284 \times 1.2174) + 7.41/(1.2394 \times 1.2284 \times 1.2174 \times 1.2064) + (12.23 + 408.72)/(1.2394 \times 1.2284 \times 1.2174 \times 1.2064 \times 1.1954)$ = $1.33 + 1.79 + 2.42 + 3.31 + 157.49 = \text{Rs.}166.34$

Since the intrinsic value of the share is lower than the last traded price, he should not purchase the shares now.

4.

Crossover	No. of shares purchased/ sold	Price	Price with transaction cost	Holding	Average price of holding	Profit/Loss
Initial holding	100	210	211.58	100	211.58	–
1	50 (sell)	216	214.92	50	211.58	167.00
2	50 (purchase)	217	218.63	100	215.11	–
3	50 (sell)	226	224.87	50	215.11	488.00
4	50 (purchase)	206	207.55	100	211.33	–
5	50 (sell)	201	200.00	50	211.33	(566.50)
Net profit/loss						89.00
Market value of holding				50	206.00	10,300

Since he adopts this strategy his value of investment is eroded by $(206.00 - 211.33) = 5.33 * 50 = 266.50 - 89 = \text{Rs.}177.50$

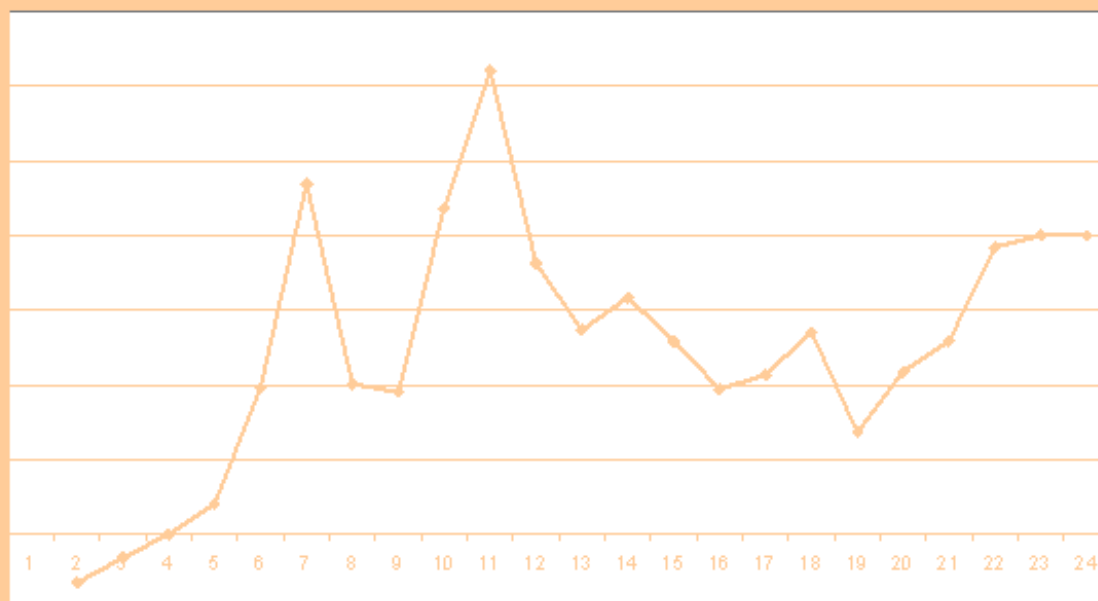
If he had bought and held the securities, his capital would have been eroded by $(206.00 - 211.58) = 5.58 * 100 = \text{Rs.}558$

So, the strategy Mr. Prashant has worked for him.

5.

Trading Day June 2006	Closing Price (Rs.)	Trading Day June 2007	Closing Price (Rs.)	ROC
1	203.70	1	190.55	-6.46
2	195.40	2	189.35	-3.10
3	190.75	3	190.85	0.05
4	182.45	4	189.90	4.08
5	158.85	5	190.10	19.67
6	128.65	6	188.95	46.87
7	154.40	7	185.55	20.17
8	154.90	8	184.40	19.04
9	128.45	9	184.55	43.67
10	114.20	10	185.10	62.08
11	133.45	11	181.80	36.23
12	143.90	12	183.25	27.35
13	145.55	13	191.70	31.71
14	151.50	14	190.70	25.87
15	159.40	15	190.40	19.45
16	163.90	16	198.95	21.38
17	163.30	17	207.55	27.10
18	178.60	18	203.05	13.69
19	166.55	19	202.85	21.80
20	161.40	20	203.15	25.87
21	146.70	21	203.10	38.45
22	146.40	22	205.00	40.03
23	141.95	23	198.75	40.01

2006 to 2007



Interpretation:

The ROC displays the amount prices have changed over the given time period as an oscillator. When the wave is above the equilibrium line, the market price is higher than it was at the start of the ROC time period. The higher the wave, the greater is the change. When the wave sinks below the equilibrium line into a trough, the lower it goes, the lower the market is in comparison to the previous price. As the wave starts coming up from the bottom of a trough, in a rising ROC, this indicates expanding momentum (considered bullish). Conversely, a falling ROC is considered bearish.

Comparing the ROC's of different time spans improves the accuracy of the analysis. A 12 month period is usually the most reliable for long term trends and 3 or 6 month period works well for intermediate trends. As mentioned previously, a 10 or 12-day ROC is a good short term indicator, oscillating in a fairly regular cycle.

The lower the ROC, the more undersold the market and the more likely a recovery. Although the opposite may hold true in that the higher the ROC, the more overbought the market, both extremes can indicate the formation of a sideways channel.

Here in the case of Gitanjali we can observe that the ROC of the company is going up therefore it may be concluded that the price of the shares of the company is showing bullish trend ahead.

Section E: Caselets

Caselet 1

6. The securities market allows people to do more with their savings than they would otherwise. It also allows people to do more with their ideas and talents than would otherwise be possible. The people's savings are matched with the best ideas and talents in the economy. Stated formally, the securities market provides a linkage between the savings and the preferred investment across the entities, time and space. It mobilizes savings and channelises them through securities into preferred enterprises.

[< TOP >](#)

The securities market enables all individuals, irrespective of their means, to share the increased wealth provided by competitive enterprises. The securities market allows individuals who can not carry an activity in its entirety within their resources to invest whatever is individually possible and preferred in that activity carried on by an enterprise.

Conversely, individuals who can not begin an enterprise they like can attract enough investment from others to make a start and continue to progress and prosper. In either case, individuals who contribute to the investment share the fruits.

The securities market also provides a market place for purchase and sale of securities and thereby ensures transferability of securities, which is the basis for the joint stock enterprise system. The liquidity available to investors does not inconvenience the enterprises that originally issued the securities to raise funds. The existence of the securities market makes it possible to satisfy simultaneously the needs of the enterprises for capital and of investors for liquidity.

The liquidity the market confers and the yield promised or anticipated on security encourages people to make additional savings out of current income. In the absence of the securities market, the additional savings would have been consumed otherwise. Thus the provision of securities market results in net savings.

The securities market enables a person to allocate his savings among a number of investments. This helps him to diversify risks among many enterprises, which increases the likelihood of long term overall gains.

7. The securities market fosters economic growth to the extent that it-(a) augments the quantities of real savings and capital formation from any given level of national income, (b) increases net capital inflow from abroad, (c) raises the productivity of investment by improving allocation of investible funds, and (d) reduces the cost of capital.

[< TOP >](#)

It is reasonable to expect savings and capital accumulation and formation to respond favourably to developments in securities market. The provision of even simple securities decouples individual acts of saving from those of investment over both time and space and thus allows savings to occur without the need for a concomitant act of investment. If economic units rely entirely on self-finance, investment is constrained in two ways: by the ability and willingness of any unit to save, and by its ability and willingness to invest. The unequal distribution of entrepreneurial talents and risk taking proclivities in any economy means that at one extreme there are some whose investment plans may be frustrated for want of enough savings, while at the other end, there are those who do not need to consume all their incomes but who are too inert to save or too cautious to invest the surplus productively. For the economy as a whole, productive investment may thus fall short of its potential level. In these circumstances, the securities market provides a bridge between ultimate savers and ultimate investors and creates the opportunity to put the savings of the cautious at the disposal of the enterprising, thus promising to raise the total level of investment and hence of growth. The indivisibility or lumpiness of many potentially profitable but large investments reinforces this argument. These are commonly beyond the financing capacity of any single economic unit but may be supported if the investor can gather and combine the savings of many. Moreover, the availability of yield bearing securities makes present consumption more expensive relative to future consumption and, therefore, people might be induced to consume less today. The composition of savings may also change with fewer saving being held in the form of idle money or unproductive durable assets, simply because more divisible and liquid assets are available.

The securities market facilitates the internationalisation of an economy by linking it with the rest of the world. This linkage assists through the inflow of capital in the form of portfolio investment. Moreover, a strong domestic stock market performance forms the basis for well performing domestic corporate to raise capital in the international market. This implies that the domestic economy is opened up to international competitive pressures, which help to raise efficiency. It is also very likely that existence of a domestic securities market will deter capital outflow by providing attractive investment opportunities within domestic economy.

Any financial development that causes investment alternatives to be compared with one another produces allocational

improvement over a system of segregated investment opportunities. The securities market and its institutions help the user in many ways to reduce the cost of capital. They provide a convenient market place to which investors and issuers of securities go and thereby avoid the need to search a suitable counterpart. The market provides standardized products and thereby cuts the information costs associated with individual instruments. The market institutions specialize and operate on large scale which cuts costs through the use of tested procedures and routines.

Caselet 2

8. "An 'efficient' market is defined as a market where there are large numbers of rational, profit-maximizers actively competing, with each trying to predict future market values of individual securities, and where important current information is almost freely available to all participants. In an efficient market, competition among the many intelligent participants leads to a situation where, at any point in time, actual prices of individual securities already reflect the effects of information based both on events that have already occurred and on events which, as of now, the market expects to take place in the future. In other words, in an efficient market at any point in time the actual price of a security will be a good estimate of its intrinsic value."

In reality, markets are neither perfectly efficient nor completely inefficient. All markets are efficient to a certain extent, some more so than others. Rather than being an issue of black or white, market efficiency is more a matter of shades of gray. In markets with substantial impairments of efficiency, more knowledgeable investors can strive to outperform less knowledgeable ones. Government bond markets for instance, are considered to be extremely efficient. Most researchers consider large capitalization stocks to also be very efficient, while small capitalization stocks and international stocks are considered by some to be less efficient. Real estate and venture capital, which don't have fluid and continuous markets, are considered to be less efficient because different participants may have varying amounts and quality of information.

9. Weak-form efficiency

- No excess returns can be earned by using investment strategies based on historical share prices or other financial data.
- Weak-form efficiency implies that Technical analysis techniques will not be able to consistently produce excess returns, though some forms of fundamental analysis may still provide excess returns.

Semi-strong form efficiency

- Share prices adjust within an arbitrarily small but finite amount of time and in an unbiased fashion to publicly available new information, so that no excess returns can be earned by trading on that information.
- Semi-strong form efficiency implies that Fundamental analysis techniques will not be able to reliably produce excess returns.
- To test for semi-strong form efficiency, the adjustments to previously unknown news must be of a reasonable size and must be instantaneous. To test for this, consistent upward or downward adjustments after the initial change must be looked for. If there are any such adjustments it would suggest that investors had interpreted the information in a biased fashion and hence in an inefficient manner.

Strong-form efficiency

- Share prices reflect all information and no one can earn excess returns.
- If there are legal barriers to private information becoming public, as with insider trading laws, strong-form efficiency is impossible, except in the case where the laws are universally ignored.

Caselet 3

10. There are a number of strategies that can help limit risk while offering the potential of higher returns.

- Investing in a variety of investments, or simply following the old adage "Don't put all your eggs in one basket." With a portfolio spread among several different investments, you benefit when each type is doing well, and also limit exposure when one or more investment is performing poorly.
- Building upon the diversification concept, with asset allocation you create a customized portfolio consisting of several asset categories (cash, stocks, bonds) rather than individual securities. Changing economic conditions affect various types of assets differently; consequently, each asset category's return may partially offset the others'.
- Systematically investing a fixed amount at regular time intervals. When this disciplined program is adhered to and market fluctuations are ignored, it attempts to "smooth out" the ups and downs of the market over the long haul. Dollar cost averaging, however, cannot guarantee a positive return in a declining market and you must consider your ability to continue investing on a regular basis under all market conditions.

- 11.** Diversification can help to reduce portfolio risk by eliminating un-systematic risk for which investors are not rewarded. Investors are rewarded for taking market risk. Because diversification averages the returns of the assets within the portfolio.

Diversification can help reduce risk by eliminating unsystematic risk from a portfolio. By choosing securities of different companies in different industries, one can minimize the risks associated with a particular company's "bad luck." By diversifying among asset classes that are negatively or weakly correlated, you further reduce the volatility of your portfolio.

However, diversification can reduce the return of the portfolio as well. By selecting several assets, the overall return on portfolio will be the weighted average of the returns of those assets. For example, let us look at a portfolio made up 50/50 of single stock and a single bond. In one year, the stock has a total return 30%, the bond 6%. The portfolio return will only be 18% (36 divided by 2). Whereas, if the entire portfolio was invested in the stock, the return would have been 30%.

[< TOP OF THE DOCUMENT >](#)