REPORT XX

DISINVESTMENT COMMISSION

MAY
2003

'Trikoot - I', IInd Floor
Bhikaiji Cama Place, R K Puram
New Delhi - 110066

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Note: The Tables contained in this Report are based on information received from the management of the PSEs and other sources.

PART - A

1. INTRODUCTION

The Disinvestment Commission was reconstituted vide Government of India, Ministry of Disinvestment Resolution No.11012/1/2000-Admn. dated 24th July, 2001. Thereafter, the Commission submitted seven Reports (Report Nos. XIII, XIV, XV, XVI, XVII, XVIII and XIX). Earlier, during 1996-99, the Commission made recommendations in respect of 58 PSEs which had been referred to it by the Government.

This Report (No. XX) contains recommendations in respect of the following companies:

1. Brahmaputra Valley Fertilizer Corporation Ltd. (BVFCL)
2. Hospital Services Consultancy Corporation Ltd. (HSCC)
3. National Seeds Corporation Ltd. (NSCL)

With this report, the reconstituted Commission has submitted fresh recommendations in respect of 23 companies and review recommendations for 4 companies. All these reports are available in Disinvestment Commission's website titled **www.disinvest.gov.in.**

Currently, the following Public Sector Enterprises are under study:

1. Bharat Sanchar Nigam Ltd.
2. Central Cottage Industries Corporation Ltd.
3. Container Corporation of India Ltd. (Review)
4. Educational Consultants India Ltd.
5. Mahanagar Telephone Nigam Ltd.
6. National Film Development Corporation Ltd.
7. National Handloom Development Corporation Ltd.
8. National Mineral Development Corporation Ltd. (Review)
9. North Eastern Electric Power Corporation Ltd.
10. Power Finance Corporation Ltd.
11. Water & Power Consultancy Services (India) Ltd.

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PART - B

2. SPECIFIC RECOMMENDATIONS

2.1 BRAHMAPUTRA VALLEY FERTILIZER CORPORATION LIMITED (BVFCL)

INTRODUCTION

Brahmaputra Valley Fertilizer Corporation Limited (BVFCL) was formed in April 2002. Earlier, the company was part of Hindustan Fertilizer Corporation Limited (HFCL). HFCL had fertilizer plants at Barauni, Durgapur, Haldia, and three plants at Namrup (in Assam). BVFCL was formed to take Namrup-I, II and III plants in its fold after demerger from HFCL. Namrup II plant is shut down since November, 1994 but is planned to be commissioned in mid-2003. The Ammonia produced in Namrup-I plant is taken in Namrup-III plant for urea production.

HFCL has been making losses almost since inception. Namrup-I and III are the only plants that are operational at present, and a major revamp job at Namrup-II is under progress. The other plants of HFCL are Naphtha based and thus not efficient and economical. Haldia plant was never fully commissioned and is lying virtually redundant since construction.

Under the provisions of the Sick Industrial Companies (Special Provisions) Act, 1985, HFCL has been declared a "Sick Industrial Company" by the Board for Industrial and Financial Reconstruction (BIFR). BIFR, in its order dated 12.12.2001, confirmed its opinion of winding up of the HFCL as a whole. However, an appeal, against this decision, was submitted before the Appellate Authority for Industrial and Financial Reconstruction (AAIFR) which has approved the de-merger of Namrup unit (comprising the three plants) from HFCL as a separate company. An appeal against the order of the AAIFR filed by the State Bank of India and others is pending in the Delhi High Court.

The decision to separate BVFCL from HFCL has been taken with the understanding that it would be a viable unit on a standalone basis (when its plants are fully revamped and operational).

The objectives of the company permit it to undertake businesses related to production of chemicals. It is also enabled to carry on businesses in chemical, mechanical and electrical engineering fields. The other objectives are broad enough for the company to enter into other businesses such as power generation, transportation, and manufacturing & trading in general.

BVFCL is a private limited company and its equity is fully held by the Government of India.

The company has an authorised share capital of Rs.5100 Mn (5,100,000 equity shares of Rs. 1,000 each). Its paid up share capital as of March 31, 2002 was Rs.3669.7 Mn and share application money pending allotment was Rs.1012.7 Mn. The company had 1953 employees on its rolls as on 1.4.2002.[1]

INDUSTRY REVIEW[2]

Global Scenario

The global fertiliser industry is estimated at around $ 35-40 billion in 1999-2000. There are around one thousand fertiliser manufacturing companies with around three thousand production units located across the world. The bigger companies account for less than five per cent of the total world market share.

The implementation of WTO arrangements is also likely to have a significant impact on the world fertilizer industry. According to the International Fertiliser Industry Association (IFIA), world fertiliser consumption has been estimated to increase by 2.3 per cent, from 141 Mn metric tonnes (MT) in 1999-2000 to 158 Mn MT in 2004-2005. Latin America is expected to account for around 15 per cent of the estimated increase in consumption; Central Europe and the Russia, around 14 per cent; South-East Asia, around 14 per cent; and North America, around 7 per cent. China and India are expected to account for the most significant portion (43 per cent) of the estimated increase in consumption. However, in Western Europe and Japan, consumption is expected to decline gradually.

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1. As regards share capital and number of employees, it may be noted that although BVFCL has been demerged from HFCL, demerger modalities are still being finalised. Thus, the exact number of employees and the exact paid-up share capital would be clear only after all demerger modalities are complete.
2. This section is based on the Fertiliser industry report prepared by CRIS INFAC, a subsidiary of CRISIL.

Asia is the largest importer of urea, ammonium phosphates and potash. China and India are in particular the largest importers, and variations in their import requirements have a major impact on world prices.

Domestic Scenario

India is the third largest producer and consumer of fertilizers in the world, after China and USA. In 2000-01, India consumed 35.6 Mn MT of chemical fertilizer materials[3], which is over one fourth of total world consumption. Of this, 3.5 Mn MT were imported into the country, largely from the US, CIS and Middle East countries.

Demand growth

Chemical elements, nitrogen (N), phosphorus (P) and potassium (K) are the primary fertiliser nutrients. Accordingly, another way of classifying fertilisers is based on the nutrient types. Thus fertilisers can be clubbed under broadly four categories: Nitrogenous fertilisers, Phosphates fertilisers, Potassic fertilisers and Complex fertilisers (which comprise varying levels of NPK). Nitrogenous fertilizers have the maximum market share. The table below shows the market share of all three categories of fertilisers and their growth trends:

Table 1 – Fertilizer consumption ('000 MT)

				Share(%)	Growth(%)
	1994-95	1997-98	2000-2001	2000-2001	CAGR (5 year)
Nitrogenous	1	0730	011	56.6	1.1
Urea	1711	196 1	191 6	54.0	1.4
Others	1170	1109	9 6	.6	-4.
Phosphatic	573	3 75	941	.	-1.
Potassic	1 1	174	1 39	5.	5.5
Complex	7561	911	10665	30.0	7.9
Total	**29697**	**35465**	**35557**	**100.0**	**2.9**

Source: Credit Rating Information Services of India Ltd. (CRISIL) Infrastructure Advisory

3. Fertilisers can be categorised into chemical, organic and bio fertilisers. This analysis has been conducted on the chemical fertilisers, which are used most extensively.

Supply scenario (capacity, capacity utilization and industry structure)

In 2000-01, total investments in the fertiliser industry were around Rs 256 billion. The public sector accounts for 29 per cent of the total investment in the industry, the private sector for 54 per cent, and the co-operative sector for 17 per cent. However, in terms of capacity, the public sector accounts for 32 per cent of the total capacity in the industry, the private sector for 45 per cent and the co-operative sector for 23 per cent. The difference between the relative shares of capacity and investments of the different sectors is primarily due to the recent entry of the private sector (and hence, the higher investment costs).

India's requirement is mostly met by indigenous fertilizer production and it imports some fertilisers (approximately 10% of its need). Potassic fertilisers are almost entirely imported, as India does not have the required raw materials for the same.

In the urea segment, concentration (of number of plants and dominance of the largest plants) is low, in spite of the high capital requirements. This is due to the large market size and the minimum economic size (MES) of a plant (MES of any plant is approximately seven lakh MTs per annum). The average capital investments per MT of urea for a plant of this size is between Rs 17,000 to Rs 18,000.

However, the larger fertiliser companies have increased their share of aggregate capacity. Consequently, the concentration ratio, in terms of the dominance of the largest companies, is high in the urea market, the top six-fertiliser companies[4] accounting for sixty-two per cent of total urea production. Similarly, the concentration ratio in the Diammonium Phosphate (DAP) segment is even higher, with the top six DAP producing companies accounting for about eighty-four per cent of total production. Phosphatic fertiliser segment is fragmented due to low entry barriers (low capital investments and access to technology).

The average capacity utilization for the better-operated urea plants ranges between 95% to 100 %.

4. IFFCO, KRIBHCO, RCF, NFL, Indo Gulf and CFCL

Policy & Regulatory issues for the industry

Historically, the Government of India (GoI) has formulated policies to control and support the fertilizer industry, with the objective of maintaining prices of essential fertilisers at low levels and increasing foodstock production. These policies include:

- Controlled build up of capacities through licensing
- Controlled pricing of all fertilisers and subsidy support to manufacturers
- Import of fertilisers and important intermediates through canalizing agents
- Subsidised pricing and controlled allocation of feedstock
- Control on distribution and marketing

However, as a part of economic liberalization process started in 1991, the Government has opted in favour of a policy of reducing controls on the fertilizer industry. Sectoral reforms were initiated in 1991-92 in the fertiliser industry, such as decanalisation of imports of fertiliser intermediates, raw materials, DAP and other complex fertilisers. This was in addition to the removal of the customs duty on phosphoric acid. Although urea, the main nitrogenous fertiliser, continues to be under control, reform initiatives continue to guide future decontrol in feedstock and fertiliser prices.

Pricing and subsidy of fertilisers

Pricing and distribution of the urea segment is under government control. Fertiliser Industry Coordination Committee (FICC) fixes unit realization for each urea plant according to RPS (Retention Price Scheme). The difference between farmgate price and Retention Price (RP) is given by the Government as subsidy to the manufacturers. The subsidy component accounts for a large portion of the player's urea realization due to low farmgate prices. Farmgate price too is fixed by the government. The RP is decided every three years when the RPS is reviewed. The RPS takes into account the fixed and variable costs of a plant and ensures to the plant 12% Return on Networth or Capital Employed, whichever is lower. RP composition is shown below:

RP = **variable costs** (raw material costs, energy costs and indirect taxes) + **conversion costs** (wages, repairs and maintenance) + **selling costs** (advertising

and distribution costs) + **interest** + **depreciation** (at 6.33 % straight line method) + **profits** (12% RoNW or RoCE, whichever is lower).

The variable costs are reimbursed, based on consumption and operational efficiency norms. The fixed cost components are reimbursed, based on normative capacity utilization (90% in general[5]). However these costs are reimbursed based on actual dispatch. Thus plants achieving higher capacity utilization and operational efficiencies (than the norms) would benefit the most, while those operating below norms stand to lose.

Due to the incentive structure, companies could understate capacity, thereby claiming a higher capacity utilization for the same quantity of production and seek higher subsidies. Lately the government has reassessed the capacities of some plants to correct this understatement of capacities. Secondly, government has now decided to permit dispatches to only 100% capacity utilization (of reassessed capacity) of plants and incremental dispatches over 100% utilization would be provided subsidy at a much reduced rate. Thus companies can no longer understate capacities, and seek subsidies for performing over 100% capacity utilization. Due to the retrospective nature of these policies, the industry would have to pay out Rs.4.61 Bn to the government, in lieu of excess subsidy received in the past years.

Further, the RP for many companies has been reset based on their improved consumption rates. These companies are expected to reimburse the government based on the new norms.

Government is also phasing out, over the next few years, the vintage relief (for normative capacity utilization) for old plants.

Import and licensing policy

Import, pricing and distribution of urea is totally controlled by government. Import contracts are given to Minerals and Metals Trading Corporation (MMTC) and State Trading Corporations (STCs). Fixed handling charges are given to these entities. The government also determines the area of distribution, which is primarily in coastal areas (to avoid giving freight subsidy).

5. In the case of Namrup plant III, it is fixed at 85% in order to account for vintage characteristics of the plant.

On the contrary, many of the other fertilisers such as DAP and Muriate of Potash (MoP) are allowed under open general license (OGL). Government continues to provide adhoc subsidy on these.

Freight and distribution system for urea

The entire production and sales of urea is governed by allocations made under the Essential Commodities Act. Based on the demand estimate prepared by Ministry of Agriculture, urea allocations are made to different states from different urea plants. These allocations made by the Ministry of Agriculture are used by the Department of Fertilisers to issue movement orders under the Fertiliser (Movements and Control) Act, 1973.

The manufacturer is paid an equated freight subsidy (freight costs incurred in transporting fertilisers from the point of production to the Government designated point of consumption).

Pricing of feed stocks

The primary feedstocks in the industry are natural gas, naphtha and fuel oils. Natural Gas is the cheapest and most energy efficient feedstock. It is supplied largely by GAIL, OIL & ONGC. Natural gas is the most used feedstock with more than forty percent of the plants based on the same. Till 1996-97, prices of natural gas and naphtha were controlled by the government. However, the government has over the past few years linked the same to international price movements. However, the ceiling price (Rs 2850 per tcm) and floor price (Rs 2150 per tcm), within which this variation can take place, is still fixed by the government. India has a disadvantage in terms of higher feedstock price as compared to other major producing countries.

The government has a concessional policy for the North-east region (including Assam) wherein the ceiling price (Rs 1700 per tcm) and floor price (Rs 1400 per tcm) are much below that of the rest of the country. In addition, there is an additional discount of Rs 300 per tcm.

It is expected, in the industry circles, that the gas price would be increased over the next few years in phases. However, the concessional policy for North East region is expected to continue and thus the price increase would only be proportionate to that for the rest of the country.

Since the late 1990s, the Government has been contemplating phasing out the RPS. RPS has achieved the declared objectives of ensuring development and growth of the fertiliser industry. However, it has been criticised for encouraging the units to prove and claim costs rather than save on costs and become competitive. It also front-loads capital related charges (CRC) and has thus resulted in disproportionate benefits for the newer units, while penalising the older units by restricting allowance under CRC resulting in lower surplus for modernisation activities. Hence, several committees have recommended for replacement of RPS with alternative pricing mechanisms.

The Hanumant Rao Committee has recommended a uniform normative referral price (NRP) for urea plants, which would be based on long run marginal costs methodology (LRMC). Simply, it means that manufacturers would be compensated based on a uniform price per MT of fertiliser sold. This would result in removal of capacity utilization linked returns. This system promotes units having lower cost of production. Further, this system is more appropriate for gas-based plants. The Committee has also recommended that farmgate price be controlled for a few more years after which demand-supply situation would determine price levels.

The Expenditure Reforms Committee has recommended eventual decontrol of the sector over seven years. In the meanwhile, government would provide concession under the group concession scheme whereby plants would be grouped under five groups based on age and use of fuel. Plants under each group would get similar concessions. The Committee further recommends phasing out concessions for non gas-based plants over four stages during these seven years. The group concession scheme has come into effect from April, 2003.

Although the group concession scheme is expected to overcome the deficiencies of the RPS, it could result in the closure of some domestic capacities, which might affect fertiliser availability and result in greater dependence on imports in the initial years.

WTO Implications

According to the agreements at the WTO, canalisation of urea imports was equivalent to quantitative restrictions (QRs) and had to be removed in 2001-

2002. Although, most Indian plants are comparable with the international standards in terms of energy efficiency, the Indian plants are at a significant disadvantage due to the high cost of feedstock, and hence, tariffs are required to protect the industry. India has not yet committed to any bound rate of duty for urea. Hence, there is adequate scope for fixing the import tariffs at relatively high levels.

Policy and regulatory outlook

Government policies would continue to influence the structure and profitability of the fertiliser industry. In future, policies would be influenced by a combination of the need to ensure food security through increased usage of fertilisers in the correct ratio, reducing subsidy, in order to control the fiscal burden and the increasing necessity to confirm with global practices under the WTO norms.

Complete decontrol of urea is not expected, by the industry circles, in the next three to five years as it might increase farmgate prices, leading to a reduction in demand and thus impacting the profitability of the less efficient. However, gradual reduction in freight subsidy combined with decontrol of dispatch based sales is expected by the industry in the near future.

Industry outlook

The industry is expected to grow at around two to three percent over the long term.

The reduction in profitability and the uncertainty in the policies (such as revision in RPS, implementation of group concession scheme and liberalising imports) are likely to prevent any further major domestic capacity addition (other than the already approved projects) over the next five years. Hence, given such uncertainties in the industry and a gestation period of 3-4 years for the commissioning of a new plant, there is not likely to be any new capacity addition in the next 4-5 years.

Competitive advantages

Indian urea manufacturers have the disadvantage of higher cost of capital and the impact of rupee depreciation on the import of capital equipment and the import of feedstock (in case of a domestic shortfall). In addition, since India

is the third largest consumer of fertilisers, any large imports would result in a significant increase in the international prices of urea. The price advantage due to such imports should justify reducing domestic production and investment in the sector. Hence, the viability of domestic manufacturers would need to be evaluated after considering the desired level of domestic production, and the extent of reliance on imports.

The international competitiveness of DAP manufacturers in India is low, given the diverse inputs used in domestic manufacturing. India does not have adequate deposits of the requisite grades of rock phosphate and sulphur. In spite of this disadvantage, setting up of indigenous capacities has been encouraged on strategic considerations, such as food security. In order to reduce the disadvantage for the domestic DAP manufacturers, the government follows a policy of differential subsidy with respect to domestic DAP and imported DAP. In spite of the favourable policy from the government, indigenous production of DAP is likely to remain inadequate to meet demand and hence import is likely to continue.

Key Success Factors in the industry

Periodic capacity additions

In the past, there have been significant variations in the demand for fertilisers during any particular year. At present, there is domestic deficit in all the nutrients, which necessitates imports. As a result, any significant demand growth in a particular year is likely to be met by additional imports. Hence, players with the ability to periodically add capacity would be able to take advantage of the higher growth.

Feedstock

Feedstocks account for nearly 66 per cent of the fertiliser industries variable costs (variable cost to fixed cost ratio was around 90:10 for the fertiliser industry in 2000-01). As a result, the right choice of feedstock is critical, in terms of availability and controlling costs. Over the next 2-3 years, the availability of natural gas (domestic) is expected to remain constrained and consequently, LNG (imported) and/or naphtha may emerge as the preferred feedstock. The increasing link between local and international natural gas prices is also likely to partly alter relative cost advantage which currently exists for

natural gas. Also, in the next 5-7 years, availability of naphtha could be constrained if naphtha based fertiliser plants delay in switching to Natural Gas. Hence, companies, which have the facility to switch between alternate feedstocks, would be better positioned to overcome the deficit situation.

Efficiency of operations

Fertiliser producers with well depreciated plants, efficient operations (in terms of input-output and working capital norms), and a conservative capital structure are expected to perform better as compared with the other producers. These factors are likely to gain added importance over the next five years, with the possibility of a gradual decontrol of urea. A conservative capital structure may also be necessary to withstand the highly competitive business conditions, which may emerge in future.

Location

Freight being a significant part of selling cost, geographical location of the plant assumes importance in a decontrolled scenario. A manufacturer situated near areas of high demand would benefit from low freight costs and working capital requirement. This would specifically be relevant to urea manufacturers using gas, as they would not have to transport raw material if they are located near pipelines. Inland location would protect manufacturers from imports, especially during periods of low international prices.

OPERATIONS OF BVFCL

BVFCL has two plants for urea production, namely Namrup II and Namrup III. Work on Namrup II is in progress and the plant is expected to be recommissioned in the next few months. The plants use natural gas as feedstock.

Namrup I has three sub-units for production of ammonia, sulphuric acid and ammonium sulphate respectively. According to company officials, ammonium sulphate plant is not operational as urea has replaced the product as the preferred form of fertiliser. Besides, the ammonium sulphate unit is in poor condition. As a result, the sulphuric acid plant, which used to provide sulphuric acid to the ammonium sulphate unit is now redundant.

The two urea plants Namrup II & III have an installed capacity of 3,30,000 MT per annum and 3,85,000 MT per annum respectively. However, the capacities of these two plants have been derated to 1,90,000 MT and 3,30,000 MT. Namrup II and III also have one ammonia sub-unit each.

The company's plants have in the past had very poor energy efficiency of more than 20 Mkcal per MT of urea produced as against energy efficiency of around 6 Mkcal per MT of urea produced for efficient urea plants using natural gas as feedstock. This figure is likely to come down to around 10 to 11 Mkcal per MT of urea, after revamp of the plant.

The company has a captive power plant and uses natural gas as the fuel. It also sources electricity from other outside sources (upto 15.5% in 2001-02). The own generation figure has gone down in recent years due to captive power plant failures. The own generation costs are significantly lower at Rs 1.28/unit as compared to electricity purchased at Rs 5.09/unit.

All the plants have, since inception, not achieved high capacity utilisation. The company's highest combined capacity utilisation (of all three plants) was recorded at around 49% in 1987. The Namrup III plant has been the most efficient historically and has recorded 70% capacity utilisation in 1996. This is very low when compared with efficient plants such as that of Tata Chemicals Limited, which recorded over 100% capacity utilisation in 2000-01.

The company's plant and machinery is almost fully depreciated. The table below shows the capacity utilisation of various units during 1999-2000 to 2001-2002:

Table 2 - Capacity utilisation

	2001-2002	2000-2001	1999-2000
Finished products			
Urea plant II			
Installed capacity (after derating) in MT	190000	190000	190000
Production in MT	0	0	0
Capacity utilisation (%)	0.00	0.00	0.00
Urea plant III			
Installed capacity (after derating) in MT	330000	330000	330000

...contd.

	2001-2002	2000-2001	1999-2000
Production in MT	64210	167100	122290
Capacity utilisation (%)	19.46	50.64	37.06
Overall capacity utilisation (%)	***12.35***	***32.13***	***23.52***
Intermediate products			
Ammonia plant I			
Installed capacity (after derating) in MT	43000	43000	43000
Production in MT	207	2112	9578
Capacity utilisation (%)	0.48	4.91	22.27
Ammonia plant II			
Installed capacity (after derating) in MT	122400	122400	122400
Production in MT	0	0	0
Capacity utilisation (%)	0.00	0.00	0.00
Ammonia plant III			
Installed capacity in MT	198000	198000	198000
Production in MT	39225	101768	66245
Capacity utilisation (%)	19.81	51.40	33.46
Sulphuric acid			
Installed capacity (after derating) in MT	82500	82500	82500
Production in MT	0	528	390
Capacity utilisation (%)	0.00	0.64	0.47

Source: CRISIL Infrastructure Advisory

The table below illustrates how poor BVFCL's performance is, compared to three other fertilizer companies in the public sector:

Table 3 - Comparison of operations of urea producers (2000-2001)

Company	BVFCL	Madras Fertilisers	RCF	NFL
Capacity Utilisation (%)	32	84	87	90
Energy Efficiency* (Mkcal / MT)	20.75 (Namrup III)	9.58	11.06 to 14.85 (for various plants)	5.9 to 10.5 (for various plants)

*Note: Energy efficiency as per ERC (1998-99)

Source: CRISIL Infrastructure Advisory

Marketing, Sales and Distribution

BVFCL has negligible market presence. In 2002, it sold less than one lakh MT of urea (less than 0.33% of total urea consumption in the country).

However, the company's plants enjoy locational advantages. Its plants, being the only urea producing plants in the north-east region, West Bengal, Orissa, Jharkhand, Chattisgarh and Bihar, have a transportation advantage vis-à-vis other plants. Its closest competing plants are in Uttar Pradesh - Indo Gulf Fetilisers plant at Jagdishpur and IFFCO's plant at Phulpur. Nevertheless, according to company officials, around eight competing manufacturers are marketing their products in the region despite their plants being far away from the user-market.

The company has a four-hundred strong dealer network across Assam & north-east, Bihar and West Bengal. However, in effect only a few of them are currently being used, since production levels are low.

Competitors are offering non-cash based incentives to dealers. Since the company realises revenues only on actual sales, there is a continued need for developing high dealer margins in future, especially since sales are expected to be de-regulated. Currently, dealers get a fixed margin of Rs 180 to 200 (for cooperatives) per MT of urea sold on farmgate price of Rs 5070 per MT of urea.

Feedstock supply

The company's plants use natural gas as feedstock. This is competitively advantageous given the efficiencies and lower costs derived by use of gas as feedstock. The company is traditionally supplied gas by Oil India Ltd. (OIL) and ONGC with OIL supplying most of the company's needs. Assam Gas Company Limited transports the same to the plant. The company has recently renewed its contract with OIL, GAIL and Assam Gas Company Limited (in 2001-2002) for supply of gas for another ten years. The ONGC fields from where gas is being supplied to the company are expected to have reduced production in the coming years. On the other hand, there are newer gas finds in Tripura and other parts of the region, which are expected to ease the situation over the next two to three years. Thus, feedstock availability should not be a major problem for the company if such developments take place.

Human resources

The company has 1897 employees. Approximately 80% of employees are workers and rest 20% are at the executive level. It is expected that approximately 120 employees from the marketing division of HFL would be transferred to the company as it currently does not have a marketing set-up. This manpower figure has been coming down gradually over the years.

A recent National Productivity council report has recommended an optimal manpower of 1660 for the company. By 2006-2007, the company is expected to achieve this figure as a large number of workers would retire in the interim period.

FINANCIAL PERFORMANCE

The company[6] is in poor financial health. The company has been incurring operating losses for the past many years, as the table below would show:

Table 4 - Profit & Loss Account of BVFCL[7]

	2001-2002		2000-2001		1999-2000	
	Rs Mn.	% of OI	Rs Mn.	% of OI	Rs Mn.	% of OI
Gross Sales	474.6		665.6		551.2	
Other Indirect Taxes	-0.2	-0.05	-0.9	-0.14	-0.3	-0.06
Net Sales	474.4	99.98	664.6	100.00	550.8	99.99
Other related income	0.1	0.02	0.0	0.00	0.1	0.01
Operating Income (OI)	**474.5**	**100.00**	**664.6**	**100.00**	**550.9**	**100.00**
Material Costs	184.0	38.77	315.8	47.52	240.5	43.66
Decretion to Stocks	102.4	21.58	-120.3	-18.10	15.3	2.78
Consumable Stores	112.1	23.63	77.9	11.73	83.4	15.13
Power and Fuel	239.1	50.39	395.0	59.43	293.3	53.24
Employee Costs	438.2	92.34	424.9	63.92	372.1	67.55
Other Mnfg. expenses	104.6	22.04	90.6	13.62	83.8	15.22
Other Expenses	126.9	26.75	124.6	18.75	135.1	24.52

...contd.

6. BVFCL is a new company and thus this financial analysis has been undertaken on the basis of annual reports for the de-merged Namrup Unit.

7. The P&L statement of BVFCL has been reworked based on acceptable accounting practices. Gross sales include interdivision sales to HFCL as the company did not have its own marketing unit at the time of preparation of accounts for the year.

	2001-2002		2000-2001		1999-2000	
Selling Expenses	41.6	8.76	63.4	9.53	52.2	9.47
Misc. expenses written off	0.0	0.00	0.5	0.08	0.4	0.07
Less Expd. Capitalised	-139.9	-29.48	-124.8	-18.77	-144.3	-26.20
Cost of Sales	**1209.0**	**254.79**	**1247.5**	**187.70**	**1131.7**	**205.43**
OPBDIT	**-734.5**	**-154.79**	**-582.9**	**-87.70**	**-580.8**	**-105.43**
Interest & Finance Charges	149.8	31.57	468.3	70.46	271.1	49.22
Less Interest Capitalised	0.0	0.00	-98.9	-14.88	-23.3	-4.22
OPBDT	**-884.3**	**-186.36**	**-952.3**	**-143.28**	**-828.7**	**-150.43**
Depreciation	31.3	6.61	33.2	5.00	55.5	10.08
OPBT	**-915.7**	**-192.97**	**-985.6**	**-148.29**	**-884.2**	**-160.51**
Non operating Income	9.5	2.01	10.8	1.62	7.1	1.29
PBT	**-906.1**	**-190.96**	**-974.8**	**-146.66**	**-877.1**	**-159.21**
Cash Adjustments	2.0	0.42	-20.2	-3.04	31.3	5.68
Extraordinary income	632.5	133.29	0.0	0.00	0.0	0.00
APBT	**-271.7**	**-57.25**	**-995.0**	**-149.71**	**-845.8**	**-153.54**
Tax	0.0	0.00	0.0	0.00	0.0	0.00
APAT	**-271.7**	**-57.25**	**-995.0**	**-149.71**	**-845.8**	**-153.54**
Dividend	0.0	0.00	0.0	0.00	0.0	0.00
Accretion to reserves	271.7	-57.25	-995.0	-149.71	-845.8	-153.54
Net cash accruals	-240.3	-50.65	-961.3	-144.63	-789.9	-143.39

Source: CRISIL Infrastructure Advisory

Sales and income growth

The income break-up of the company is shown in the tables below:

Table 5 - Operating income -BVFCL

Interdivision sales of urea	Rs 406.35 Mn
Direct sales of urea and ammonia	Rs 1.25 Mn
Other income (freight subsidy receipts)	Rs 67.10 Mn
Less indirect taxes	*Rs 0.20 Mn*
Total operating income	**Rs 474.50 Mn**

Source: CRISIL Infrastructure Advisory

Table 6 - Sales volumes and values at BVFCL

	2001-2002		2000-2001		1999-2000	
	Quantity (MT)	Value (Rs Mn)	Quantity (MT)	Value (Rs Mn)	Quantity (MT)	Value (Rs Mn)
Manufactured products						
Urea (Tech.Grade)	149.90	1.04	41.065	2.86	200.00	1.29
Sulphuric acid	0.00	0.00	0.000	0.00	0.00	0.00
Ammonia	17.73	0.21	6.661	0.77	62.71	0.83
Carbon dioxide	0.00	0.00	0.000	0.00	0.00	0.00
Bought out products	0.00	0.00	0.000	0.00	0.00	0.00
Total	**167.63**	**1.25**	**47.726**	**3.63**	**262.71**	**2.12**
Transfer of stock to marketing division						
Urea	91725.20	406.35	13608.218	601.15	120170.65	499.43
Ammonium sulphate	0.00	0.000	0.000	00.00	0.00	0.00
Total	**91725.20**	**406.35**	**13608.218**	**601.15**	**120170.65**	**499.43**

Source: CRISIL Infrastructure Advisory

The large inter-division sales figure and the low sales figure are due to the fact that the company is in the process of being de-merged from HFCL and thus does not have its own marketing division to which these sales have been made.

The sales figure has been fluctuating over the years and has declined considerably since the last couple of years.

In addition, the company received almost Rs 67 Mn (or 14% of its operating income including inter-division sales) as freight subsidy reimbursements.

Material Costs

The major raw material for the company is natural gas, others being chemicals and packaging material i.e. fertiliser bags. Material costs form 38.77% of the operating income (including inter-division sales) in 2001-02 as the following table :

Table 7 - Material Costs for BVFCL(net of inter-division sales)

	2001-2002		2000-2001		1999-2000	
	(Rs.Mn)	% of OI	(Rs.Mn)	% of OI	(Rs.Mn)	% of OI
Raw materials consumed	82.5	17.39	151.5	15.15	119.4	11.94
Opening WIP	05.3	1.11	04.8	0.48	06.0	0.60
Change in WIP	0.0	0.00	0.0	0.00	0.0	0.00
Closing WIP	-2.1	-0.44	-05.3	-0.53	-04.8	-0.48
Packing materials	15.5	3.26	31.6	3.16	24.9	2.49
Royalty Cess etc. paid	0.0	0.00	0.0	0.00	0.0	0.00
Octroi; entry tax etc. paid	0.0	0.00	0.0	0.00	0.0	0.00
Freight Inward	82.8	17.45	133.3	13.33	95.0	9.50
Other material cost	0.0	0.00	0.0	0.00	0.0	0.00
Total Material Cost	**184.0**	**38.77**	**315.8**	**31.58**	**240.5**	**24.05**

Source: CRISIL Infrastructure Advisory

Power & fuel Costs

Power and fuel costs comprise more than 50% of the company's operating income (including inter-division sales) in the years 2001-2002. It has, however, decreased from earlier levels of 59% in 1999-00 and 53% in 2000-2001.

The material costs and power costs are a reflection of the energy efficiency of plant's operations for a urea plant. The combined cost for material, power and fuel for BVFCL is more than 90% of its operating income. These costs are much higher than those for energy efficient plants such as that of Indo-Gulf Fertiliser Limited, where these costs account for about 60% to 65% of operating income. This is an indicator of the poor energy efficiency of the BVFCL's plants.

Employee Costs

The employee costs over the past three years (1999-2000) have been more than 60% of operating income (including inter-division sales) and currently stand at more than 90%. However, this is largely due to the fact that the company has had low capacity utilisation and thus sales. Efficient producers such as Indo-Gulf Fertiliser have employee costs at around 2.5% of operating income.

Other Manufacturing Expenses

Repairs and maintenance to buildings, plant & machinery constitute the major chunk of other manufacturing expenses. Currently, the other manufacturing expenses are at 22% of operating income (including inter-division sales) at Rs 104.6 Mn. The other manufacturing expenses have increased at the rate of almost 12% per annum over the past three years (1999-2000 to 2001-2002). This figure has seen an increase over the past few years probably due to increasing expenditure on repairs and expenses on plant operations. The other major expense is on security of plants and buildings.

Selling Expenses

The selling expenses are currently less than 9% of operating income (including inter-division sales) at Rs 41 Mn. This is almost entirely on account of advertising and publicity. The selling expenses have been decreasing over the years.

Other Expenses

Freight expenses form the bulk of other expenses. This head accounts for 26.75% of operating income (including inter-division sales). This figure (Rs 127 Mn in 2001-2002) has been increasing over the years, despite reduction in sales. This is a reflection of the increasing fuel and transportation costs as well as the declining rail-road ratio for the company. The company also has a disadvantage vis-à-vis the rail-road ratio, which is tilted more towards road transportation (which is more expensive than rail transportation). This is mainly due to lack of rail-rack availability in the region. Due to the poor rail-road ratio, the company does not get proportionate reimbursement of freight subsidy (which assumes an ideal 70:30 rail-road ratio). The company received only Rs 67.1 Mn as freight subsidy vis-à-vis Rs 127 Mn in expenditure.

Operating margin

Since the company is running into heavy losses since the past several years, the company has a high negative operating margin, currently at minus 154% (2001-2002). This margin has worsened from minus 105% in 1999-2000 and –87% in 2000-2001.

Interest and finance charge

Interest and finance charges, which had increased substantially from Rs 173.7 Mn in 1998-99 to Rs 468.3 Mn in 2000-2001 have noticeably come down to Rs 149.8 Mn in 2001-2002. However, even at this level it is 15% of operating income. This drastic reduction has been due to government waiving its long-term loans given to the company.

Depreciation expenses

The company's plants are almost fully depreciated and thus the depreciation is low at Rs 31.3 Mn, which is slightly more than 6.61% of operating income (including inter-division sales).

This figure is however likely to go up in the year 2002-2003 as the company has undertaken major capital expenditure in the past year.

Non-operating income

The company earned a small non-operating income of Rs 9.5 Mn primarily on account of rent (53%) and interest on bank deposits and investments (40%). The non-operating income has risen by a CAGR of more than 14% over the period 1998-99 to 2001-2002

Tax

Since the company has been incurring losses for the past four years, it does not have any corporate tax liabilities.

Net Profits/Loss

The company continues to incur sizable losses which have increased from Rs 788 Mn in 1998-99 to Rs 906 Mn in 2001-2002 at a CAGR of more than 5%. This has happened despite the growth in non-operating income. The following table shows the summarised balance sheet:

Table 8 - Summarised Balance Sheet of BVFCL

(Rs. Mn)

	2001-02	2000-01	1999-00
ASSETS			
Gross Block	4036.2	4031.7	3894.5
Accumulated Depreciation	-3451.8	-3420.4	-3279.2
Net Block	584.4	611.2	615.3
Capital Work in Progress	2127.1	593.4	258.6
Net Fixed Assets	**2711.5**	**1204.7**	**874.0**
Total investments (net of provisions)	436.5	0.02	0.02
Total inventories	545.0	657.1	586.0
Total receivables	04.9	05.4	16.5
Total other assets (cash balance, loans and advances, etc.)	**505.9**	**338.6**	**216.4**
Total current assets (related to operations)	**586.4**	**699.6**	**637.5**
TOTAL ASSETS	**4204.0**	**2205.9**	**1693.1**
LIABILITIES			
Total Paid Up Equity Share Capital	3669.7	2869.7	2301.3
Share Application Money pending allotment	1012.7	0	283.4
Gross reserves	0	-544.9	-440.9
Miscellaneous expenses not written off	0	0	-0.5
Debit Balance in Profit and loss Account	-3071.2	-4436.6	-3441.6
Tangible networth	**1611.2**	**-2111.7**	**-1298.3**
Total long term debt	1303.8	2296.4	1511.4
Total short term debt	8.6	7.7	15.9
Total Debt	**1312.4**	**2304.0**	**1527.3**
Total Current Liabilities and Provisions	**1280.3**	**2013.4**	**1464.1**
TOTAL LIABILITIES	**4204.0**	**2205.9**	**1693.1**

Source: CRISIL Infrastructure Advisory

Capital structure, net worth and long term debt

BVFCL's authorised share capital is Rs.5100 Mn. Its total share capital and share application money stands at Rs.4682.4 Mn at the end of 2001-2002 while its long term debt is Rs.1303.8 Mn.

Government has recently provided a restructuring package to the company for improving its financial health and undertaking fresh investments in its plants.

Through this package GoI has written-off long term debt and interest worth Rs 2269.5 Mn in the year 2001-02. In addition,loans worth Rs 659 Mn have been converted into equity during 2001-2002 and the interest on these loans worth Rs 98 Mn, which had been booked earlier has now been reduced from current liabilities. In addition, government has infused fresh equity worth Rs 1153 Mn into the company for revamp of Namrup plants and Rs 1303.8 Mn by way of non-plan expenditure primarily for addressing gas supplier claims.

This capital restructuring is reflected in its paid up share capital and share application money, which has moved up by an aggregate amount of Rs 1812.7 Mn. (due to the fresh equity of Rs 1153 Mn and Rs 659 Mn on account of debt being converted into equity). Its paid up share capital as of March 31, 2002 was Rs. 3669.7 Mn and share application money pending allotment was Rs 1012.7 Mn. (The exact figure of paid-up share capital would be known only after all demerger modalities are completed.)

Its long-term debt is now reduced to Rs 1303.8 Mn from a high of Rs 2296.4 Mn (Rs 1637 Mn have been written off and Rs 659 Mn have been converted into equity during the year 2001-2002).

Accordingly, BVFCL's accumulated losses of Rs. 4430 Mn as of March 31, 2001 came down to Rs 3071.2 Mn as of March 31, 2002.

The capital restructuring and fresh equity investments made by Government of India have improved the net worth of the company from a minus of Rs 1298.3 Mn in 1999-00 to Rs 1611.2 Mn in 2001-2002.

Fixed Assets and Investments

The company's gross block as of March 31, 2002 was Rs. 4036.2 Mn, whereas net block assets was Rs. 580 Mn, which represents that the company has fairly depreciated assets. The company is undertaking capital work in progress worth Rs 2120 Mn mainly on account of revamp in Namrup II. The breakup of gross block is given in the following table:

Table 9 - Fixed assets of BVFCL

(Rs. Mn)

	2001-2002	2000-2001	1999-2000
Leasehold Land	17.7	17.7	17.7
Building	417.8	417.7	417.6
Plant and Machinery	3408.3	3406.9	3269.9
Office Equipment	49.7	46.7	45.6
Vehicles	6.1	6.1	6.1
Other fixed assets	136.6	136.6	137.7
Gross Fixed Assets	**4036.2**	**4031.7**	**3894.6**

Source: CRISIL Infrastructure Advisory

Plant and machinery comprise around 84% of total gross fixed assets.

Current Assets & Liabilities

The table below presents BVFCL's current assets and liabilities:

Table 10 – Situation of Current Assets and Liabilities

	2001-2002	2000-2001	1999-2000
Debtors & Bills Discounted as days Gross & Traded Sales	3.81	2.97	10.94
Days Payables as days cost of sales	400.38	342.04	359.84
Days Inventory as cost of sales	164.56	192.26	189.03
Days Finished Goods Inventory as cost of sales	29.13	58.07	25.21
Days RM & Stores Inv. as days RM & Stores consumption	550.43	420.24	567.00
Gross Curr. Assets (related to operations) as days Operating Inc.	451.06	384.17	422.39

Source: CRISIL Infrastructure Advisory

Total "receivables as days of sale" is four, which is quite under control. The company's inventory management requires substantial improvement. These are currently at more than a year's supply.

The company's payables are again at very high levels, which reflect a poor financial situation of the company. The following tables indicate the current liabilities and assets of BVFCL:

Table 11 - Current Liabilities of BVFCL

(Rs.Mn)

	2001-2002	2000-2001	1999-2000
Creditors for goods	953.4	1115.7	974.3
Advances, deposits recd. from customers, related to ops.	8.4	8.6	10.2
Other Current Liabilities related to operations.	110.1	30.1	7.1
Interest Accrued and due	00.0	588.4	269.0
Interest Accrued and not due	65.1	143.0	94.8
Total Provisions	141.9	127.0	108.7
Total Current Liabilities and Provisions	1279.0	2012.7	1464.1

Source: CRISIL Infrastructure Advisory

Table 12 - Current Assets of BVFSL

(Rs.Mn)

	2001-2002	2000-2001	1999-2000
Total investments	**0.0**	**0.0**	**0.0**
Raw and Packing Materials	0.0	0.0	1.1
Work-in-Process	2.1	5.3	4.8
Finished Goods	96.5	198.5	78.2
Stores and Spares	446.5	453.3	502.0
Total Inventories	**545.1**	**657.1**	**586.1**
Total Receivables	**4.9**	**5.5**	**16.5**
Loans, Advances, current assets related to operations	36.3	37.0	34.9
Loans, Advances, current assets not related to operations	13.0	7.2	0.3
Total Current Assets from operations	**586.4**	**699.5**	**637.5**
Cash and Bank Balances	**456.7**	**294.4**	**181.2**
Total Current Assets	**1043.1**	**994.0**	**818.8**

Source: CRISIL Infrastructure Advisory

Stores and spares are at very high levels (almost 43% of total current assets), and are more than annual sales of the company.

The raw material levels are relatively modest since the prime raw material is natural gas, which cannot be stored in the premises. This is an advantage as against naphtha or fuel base plants where working capital requirements increases due to storage requirements.

Key Operating Ratios

The poor financial condition of BVFCL can be assessed from the following table:

Table 13 - Key Operating Ratios of BVFCL (including inter-division sales)

	2001-2002	2000-2001	1999-2000
Profitability ratios			
OPBDIT Divided By Operating Income	-154.79	-87.70	-105.43
APAT Divided By Operating Income	-57.25	-149.71	-153.54
APAT Divided By Tangible Net Worth	-16.86		
APBT Divided By Operating Income	-190.96	-146.66	-159.21
Interest | excl. Bank Charges; lease rentals | Divided By Average Debt	8.27	19.28	21.48
Interest Divided By Average Adjusted Debt	8.29	19.28	21.50
Cash Flow from Operations Divided By Net Cash Accruals	625.38	50.50	68.90
Adjusted Pre Tax Earnings per share	-246.92	-339.68	-381.12
Capitalisation ratios			
Total Debt Divided By Reported Net Worth	0.81	-1.09	-1.18
Long Term Debt Divided By Reported Net Worth	0.81	-1.09	-1.16
Total Non Operational Assets Divided By Reported Net Worth	0.28	0.00	0.00
Operating Income Divided By Gross Block	0.12	0.16	0.14
Adjusted Networth Divided ByTotal Liabilities	0.38	-0.96	-0.77
Coverage Ratios			
OPBDIT Divided By Interest and Finance Charges	-4.90	-1.58	-2.34

...contd.

	2001-2002	2000-2001	1999-2000
APBDIT Divided By Interest and Finance Charges	-0.60	-1.60	-2.19
PBDIT Divided By Interest and Finance Charges	-4.84	-1.55	-2.31
Cash Flow from Operations Divided By Total Debt	-1.15	-0.21	-0.36
Free Operating Cash Flows Divided By Total Debt	-2.32	-0.42	-0.46
Total Debt Service Coverage | accrual basis |	-4.84	-1.55	-2.31
Total Debt Service Coverage | cash basis |	1.32	-0.65	-1.09
Net Cash Accruals Divided By Total Debt	-0.18	-0.42	-0.52
Liquidity ratios			
Current Ratio	0.82	0.50	0.55
Short Term Assets Divided By Total Assets	0.25	0.45	0.48
Short Term Liabilities Divided By Total Liabilities	0.31	0.92	0.87
Long Term Assets Divided By Total Assets	0.75	0.55	0.52
Long Term Liabilities Divided By Total Liabilities	0.69	0.08	0.13

Source: CRISL Infrastructure Advisory

As the following table shows, all the indicative ratios (Operating margin, net margin, RoCE, RoNW, interest coverage ratio, etc.) for BVFCL are much lower than the domestic industry averages, primarily on account of high operating losses, which in turn was due to plant breakdowns and operational inefficiencies.

Table 14 - Benchmark Industry Ratios

	Op. Margins	Net Margins	RoCE	RoNW	Gearing	Interest Coverage
	%	%	%	%	Times	Times
BVFCL[8]	-154.8	-57.2	-25.1	-16.8	0.3	-0.6

...contd.

8. Figures for 2001-2002. Inter-division sales have been included while deriving these ratios.

	Op. Margins	Net Margins	RoCE	RoNW	Gearing	Interest Coverage
	%	%	%	%	Times	Times
BVFCL[9]	-87.7	-149.7	-301.8	NA[10]	0.8	-1.6
CFCL	26.8	6.8	13.1	12.3	1.7	2.2
FACT	2.2	-8.5	-5.5	INA[11]	0.8	0.4
GNFC	19.7	5.6	14.5	12.6	1.0	2.9
IFFCO	11.8	4.0	13.6	INA	0.6	2.6
RCFL	10.0	2.7	9.4	INA	0.4	2.5
TCL	26.8	1.3	9.0	8.7	0.6	0.7
NFL	8.6	0.3	7.5	INA	0.6	2.0
IGCL	25.1	11.0	17.5	14.6	0.7	3.3

Note: Figures of Chambal Fertilisers and Chemicals Limited (CFCL); Fertiliser and Chemicals Travancore Limited (FACT); Gujarat Narmada Valley Fertiliser Company Limited (GNFC); Indian Farmers Fertiliser Cooperative Limited (IFFCO); Rashtriya Chemicals and Fertilisers Limited (RCFL); Tata Chemicals Limited (TCL); National Fertilisers Limited (NFL); and Indo Gulf Corporation Limited (IGCL) are for 2000-2001.

Source: CRISIL Infrastructure Advisory

Gearing levels are, however, low as all the previous loans as well as the accrued interest of the company have been written off by the GoI (Rs 1637 Mn of debt in FY 2001-2002).

Future Investments and Funding Plan

Requirements of Funds

The company has lined up an investment plan of around Rs. 5090 Mn for revamping its plants, part of which has been undertaken in the past few years. Out of this, almost Rs. 3560 Mn had been incurred by 2002-2003 and the balance is expected to be incurred in 2003-2004. As mentioned earlier, this plant revamp is expected to upgrade the energy efficiency from 20 Mkcal per MT of urea to a weighted average energy efficiency of 11 Mkcal per MT of

9. Figures for 2000-2001. Inter-division sales have been included while deriving these ratios.
10. NA – Not available. The ratio has been left out as the Net Worth was negative.
11. Information Not Available.

urea. Further, capacity utilisation is expected to go up (between 85% to 100%) as against the current level of 12.3%.

Fund Requirements for Capacity Expansion

Government of India is providing complete funding for the project. It has approved Rs 5090 Mn for the project with a debt equity ratio of 1:1. The terms of financing are - a moratorium of two years and at an interest rate of 13.5%. There is also a clause for penal interest rate of 2.5% for delayed payments.

Off balance sheet items

The company has recognised the following contingent liabilities as of March 31, 2002 in its annual report:

Table 15 - Contingent liabilities

(Rs.Mn)

	2001-2002	2000-2001	1999-2000
Commitment on capital account & arbitration	368.6	1495.4	130.5
Delayed payments / excise duty	2218.1	475.7	515.5
Letters of credit and bank guarantee	392.0	294.5	123.8
Total	**2978.7**	**2265.6**	**769.8**

Source: CRISIL Infrastructure Advisory

The company has very high contingent liabilities at 70% of value of total assets. According to company officials, most of the liabilities are claims by natural gas suppliers (OIL, ONGC and GAIL). However, the company is hopeful of settling the claims soon in its favour as the contract terms are in its favour. Moreover, the GoI has intervened and is providing part compensation (upto Rs 535.2 Mn) to creditors of the company.

The company also has not undertaken wage revision the past fifteen years. There are wage revision claims on the company to the tune of Rs 1304 Mn over and above its contingent liability claims.

Turnover Growth

The company has targeted increasing its capacity utilisation upto levels of 80% to 100% of revamped capacity of 5,50,000 MT per annum. The company is hopeful of selling the complete production from next year onwards (FY 2003-2004).

The company has projected an increase in its turnover from the current levels of Rs 470 Mn (which includes inter-division sales) to around Rs 2910 Mn by 2004-05, which corresponds to a CAGR of around 149%. This is mainly due to the proposed increase in production capacity that would be available after plant revamp.

The company has targeted the three regions of North East, West Bengal, and Bihar for selling its finished products (which is currently confined to North East region). The company expects to face stiff competition from seven to eight competitors, foremost among them being IFFCO, KRIBHCO, and RCF.

SWOT ANALYSIS OF BVFCL

Strengths

- **Feedstock based plants**: The company's plants use Natural gas as feedstock. Natural Gas is the most efficient plant feedstock for production of urea. Natural gas based plants provide huge savings as compared to Naphtha and fuel oil based plants.

- **Feedstock base price is low for the region**: The base price of gas for the company is around Rs 1400/ tcm as compared to Rs 2850/tcm for most other plants in the country. This advantage is due to government's policy to charge lower price for gas in the north-east region as a whole.

- **Feedstock transportation price is low**: Since the plants are close to oil and gas fields (distance is around seventy kilometres) from which it sources gas, transportation price for gas is also again very low at Rs 176 per tcm as compared to the HBJ pipeline users (around Rs 1150 per tcm).

- **Sole urea producer in the region:** The company's plants are the only urea producing plants in the north-east region, West Bengal, Orissa, Jharkhand,

Chattisgarh and Bihar, and thereby have a transportation advantage vis-à-vis other plants (closest competing plants being in Uttar Pradesh).

Weaknesses

- **Plant capacity below minimum economic size (MES):** The combined capacity of BVFCL's plants is proposed to be 5.5 lakh MT per annum as against an estimated MES of 7 lakh MT for urea fertiliser plants.

- **Poor energy efficiency:** The company's plants have in the past had a very poor energy efficiency (20.8 Mkcal and 12 Mkcal per MT of urea for Namrup II & III) as against energy efficiency of around 6 Mkcal per MT of urea produced for efficient urea plants using natural gas as feedstock. This figure is, however, likely to come down to around 12.7 Mkcal to 9.56 Mkcal per MT for Namrup II & III, after revamp of the plants.

- **Low capacity utilisation**: All the plants have, since inception, not achieved high capacity utilisation. The company's highest combined capacity utilisation (of all three plants) was recorded at around 49% in 1987. The Namrup III plant has been the most efficient and has recorded 70% capacity utilisation in 1996. But, this is very low when compared with efficient plants such as that of Tata Chemicals Limited, which recorded over 100% capacity utilisation in 2000-2001. The low capacity utilisation would affect pricing of its end product (in a decontrolled scenario) in addition to its profitability.

- **Condition of assets and technology:** The company's plant and machinery is almost fully depreciated. Although large capital expenditure is being undertaken to revamp the plant, remaining operating life of the plant is critical for future profitability and needs to be assessed.

- **High contingent liabilities:** The company has very high contingent liabilities (at 70% of value of total assets). A large portion of the same, are claims from public sector gas suppliers (ONGC, OIL and GAIL). Although BVFCL company officials claim that a large proportion of the same have been settled by intervention of Government of India, this aspect warrants detailed scrutiny.

Opportunities

- **Urea sales to be deregulated:** It is expected that the government would, over the next few years, do away with control over sales and distribution of urea. This provides and opportunity for the company to sell its products in other states in eastern region of India as well as the rest of the country.

- **Additional revenues from power plant:** The company has a captive power plant of 30 MW capacity. It also has substantial experience in operating this plant. If the plant can be operated at high capacity utilisation levels (say at 90%), it will provide an opportunity to the company of earning revenues of over Rs.800 Mn[12] per year through sale of power to third parties.

Threats

- **Government policy changes:** The sector is expected to see decontrol & deregulation over the next few years. While the company has not really benefited from the RPS (as the RP is below farm gate price), freight subsidy reductions would impact the company. In addition, decontrol of urea sales implies more competition in the region from low cost producers.

- **Imports of fertiliser:** India has not yet committed to any bound rate of duty for urea as part of its WTO commitments. Indian urea manufacturers are likely to be negatively affected if changes in WTO regulations lead to low cost imports. This is due to the fact that global feedstock prices are lower than those available to Indian urea manufacturers.

BREAKEVEN ANALYSIS AND RESTRUCTURING OPTIONS

This section assesses the breakeven sales required by the company to recover its fixed operating and financing costs.

While undertaking this analysis the following is assumed:

- Direct operating variable costs are material costs (including packaging costs); power and fuel costs; freight charges; selling costs; and consumables stores.

12. This assumes that all power produced (at 90% capacity utilisation) would be sold to a third party at Rs. 3.5 / unit.

- Fixed costs are other manufacturing expenses (mostly repairs and maintenance costs); employee costs; interest costs; and depreciation charges.

The table below presents the breakeven analysis for the company. It also presents breakeven analysis as per information provided in the Detailed Project Report (DPR) prepared for revamp of the company's plants:

Table 16 - Breakeven sales analysis for BVFCL

	Units	FY 2001-2002	FY 2003-2004	FY 2004-2005	FY 2004-2005 (DPR)
Capacity	MT	520000	495000	555000	555000
Production	MT	64210	425500	471750	555000
Sales	Rs Mn	390	2234	2477	4104
Freight subsidy	Rs Mn	67	202	189	0
Realisation	Rs/MT	4255	5250	5250	7394
Freight subsidy	Rs/MT	731	475	400	—
Total Realisation	**Rs/MT**	**4985**	**5725**	**5650**	**7394**
Variable costs	**Rs/MT**				
Fuel, Feedstock, Power and Packaging	Rs/MT	5250	2971	2982	2848
Consumables, Stores	Rs/MT	957	225	238	129
Freight	Rs/MT	1216	674	715	—
Selling expenses	Rs/MT	639	200	235	200
Total Variable costs	**Rs/MT**	**8062**	**4070**	**4170**	**3177**
Contribution	**Rs/MT**	**-3076**	**1655**	**1480**	**4217**
Fixed costs	**Rs Mn**				
Manpower	Rs Mn	381	403	393	410
Mfg expenses (including other expenses)	Rs Mn	205	189	200	326
Interest	Rs Mn	150	472	569	493
Depreciation	Rs Mn	31	275	275	260
Total Fixed Costs	**Rs Mn**	**767**	**1339**	**1438**	**1489**
Fixed costs (excl. Depreciation)	**Rs Mn**	**736**	**1064**	**1163**	**1229**
Cash Breakeven Sales	MT	NA	642839	786181	291000

...contd.

	Units	FY 2001-2002	FY 2003-2004	FY 2004-2005	FY 2004-2005 (DPR)
Breaeven Sales	MT	NA	809087	972180	353000
Capacity Utilisation					
Cash Breakeven	%	NA	129.9%	141.7%	58.9%
Breakeven	%	NA	163.5%	175.2%	71.3%

Source: CRISIL Infrastructure Advisory

The following significant observations can be made from table 16:

- In 2001-2002, the contribution is negative at minus Rs 3076 per MT. Thus breakeven sales were not achievable. This is due to high variable cost (per MT) as plant revamp is not complete and thus the efficiencies are not effected.

- In 2003-2004 i.e. after substantial plant revamp, the contribution of the company is expected to be positive at Rs 1655 per MT. This is primarily due to reduction in fuel and feedstock costs, which drastically reduce from Rs 5250 per MT in 2001-02 to Rs 2971 per MT in 2002-03. Another factor for increased contribution level is the expected increase in RP (after full revamp, according to company officials) from Rs 4255 per MT in 2001-02 to Rs 5250 per MT in 2003-2004. The company, however, may still not achieve breakeven sales as capacity utilisation required is 129.9% (for cash breakeven) and 163.5% (for total breakeven), which is unlikely to be achieved.

- In 2004-2005 i.e. after complete plant revamp, the contribution margin of the company is expected to be positive but is marginally reduced as compared to 2003-2004 (from Rs 1655 per MT in 2003-2004 to Rs 1480 per MT in 2004-2005). This is due to the marginal variable cost increase assumed for year 2004-2005. The company does not achieve breakeven sales as the capacity utilisation at 141.7% (for cash breakeven) and 175.2% (for total breakeven) is not achievable.

- The DPR prepared for plant revamp assumes very high contribution in 2004-05 (Rs 4217 per MT). This is primarily due to the assumption of

very high realisation of Rs 7394 per MT. At this level, the company requires to achieve a level of 58.9% (for cash breakeven) and 71.3% (for total breakeven). However, the company expects the RP to be fixed at Rs 5250 per MT by the government (after full revamp) and thus this high realisation assumption is not realistic.

Restructuring options

In order to achieve breakeven, options for restructuring would need to be explored. CRISIL Infrastructure Advisory has, based on the available information, analysed the following options, associated costs and their impact on the company's performance (see table No. 17), as described below:

- **Option 1 - Rationalise strength of employees to optimal levels:** National Productivity Council in its study on the company's manpower has determined the optimal employee strength to be 1660 vis-à-vis existing employee strength of about 1900 employees. Reduction in employees to 1660 implies reduction in employee costs by Rs 48 Mn (at an average cost of Rupees two lakh per employee).

However, even after undertaking this restructuring option, the company does not achieve breakeven, as capacity utilisation still remains well above achievable level at 136% (for cash breakeven) and 169% (for total breakeven). Cost to government for this restructuring option is estimated to be Rs 156 Mn.

- **Option 2 - Rationalise employee strengths and undertake capital restructuring:** This scenario assumes that the long-term debts of the company (assumed to be Rs 2550 Mn of long term GoI loans) would be written off in addition to reducing employees to 1660 (optimal strength).

In this scenario, the company achieves cash breakeven at 96% capacity utilisation. However, the company still does not achieve total breakeven. Achieving such high levels of capacity utilisation is, however, doubtful as the company has historically never achieved more than 50% capacity utilisation. Cost to government for undertaking this restructuring option comes to about Rs 2706 Mn.

- **Option 3 – Rationalise employee strengths + undertake capital restructuring + provide subsidy of Rs 250 per MT of urea produced:** This scenario assumes that the government would provide the company an additional subsidy of Rs 250 per MT of urea produced every year for achieving breakeven in addition to the employee rationalisation and capital restructuring proposed in the previous two scenarios.

In this scenario, the company achieves cash breakeven at 82% capacity utilisation. Even then, the company does not achieve total breakeven. Cost to government for undertaking this restructuring option is Rs 4218 Mn.

- **Option 4 - Rationalise employee strengths + undertake capital restructuring + increase the capital component in the RPS by Rs 250 per MT+ achieve reduction in freight costs by Rs 100 per MT:** This option assumes freight management efficiency resulting in reduction of freight costs by Rs 100 per MT in addition to the other restructuring measures as listed in option 3 above.

In this scenario, the company achieves cash breakeven at 78% capacity utilisation. However, even in this option the company does not achieve total breakeven. Cost to government for undertaking this restructuring option is Rs 4,218 Mn. It may be noted that option 4 is based on management efficiency assumptions and this is not a real cost to the government.

Thus the company, according to the analyses above, is likely to achieve cash breakeven only in options 3 & 4 (at realistic capacity utilisation levels). The restructuring cost to the government for the same is estimated at Rs 4,218 Mn.

If even after revamp, the plants' combined capacity utilisation does not go beyond 49% to 50% (which is its historical peak capacity utilisation), then, according to broad estimates, the cost to government is likely to be higher at Rs 10,931 Mn (for undertaking option 3) and Rs 10,327 Mn (for undertaking option 4). This is due to the increased subsidy required for breakeven at such low capacity utilisation levels.

The impact of restructuring BVFCL is shown in the following table :

Table 17 - Impact of restructuring BVFCL

(Rs Mn)

	Unit	Option 1	Option 2	Option 3	Option 4
Contribution Improvement					
Current contribution	Rs/MT	1480	1480	1480	1480
Special subsidy	Rs/MT	0	0	250	250
Freight reduction	Rs/MT	0	0	0	100
Revised contribution	Rs/MT	1480	1480	1730	1830
Fixed Costs reduction					
Current Fixed costs	Rs Mn	1438	1438	1438	1438
Employee reduction	Rs Mn	48	48	48	48
Debt write-offs (resulting in zero long term interests)	Rs Mn	0	327	327	327
Revised Fixed costs	**Rs Mn**	**1390**	**1063**	**1063**	**1063**
Revised Cash costs	**Rs Mn**	**1115**	**788**	**788**	**788**
Break-even capacity utilisation					
Cash Breakeven	%	136%	96%	82%	78%
Total Breakeven	%	169%	129%	111%	105%
Cost to Government					
Employee reduction	Rs Mn	156	156	156	156
Principal write off	Rs Mn	0	2550	2550	2550
NPV of Special subsidy	Rs Mn	0	0	1512	1512
Government's cost of restructuring	**Rs Mn**	**156**	**2706**	**4218**	**4218**
Contingency cost if only 50% utilisation level is achieved (perpetuity, discounted at risk free rate)	Rs Mn	NA	NA	6713	6109
Government's total cost of restructuring	**Rs Mn**	**156**	**2706**	**10931**	**10327**

Source: CRISIL Infrastructure Advisory

Cost of Closure[13]

In the table below, the inflows and outflows have been shown, as estimated by CRISIL Infrastructure Advisory, in the event of closure:

Table 18

Inflows		Outflows	
	Rs Mn		**Rs Mn**
Net Block of assets	4170.4	Secured loans	783.7
(i) Realizable value of the assets - 50%	2085.2	Long term loans	1423.2
Current Assets less Bad debts	1137.8	Current liabilities	658.6
(ii) Realizable Value - 80%	910.3		
Total Inflows (i) + (ii)	**2995.5**	**Total payments**	**2865.5**
Net Surplus	**130.0**		

Source: CRISIL Infrastructure Advisory

Thus, according to the preliminary estimate done by CRISIL Infrastructure Advisory, the company might recover Rs 130 Mn after paying all its liabilities on closure. In addition, it would incur a cost of Rs 1235 Mn on the VSS package for its employees (assumed at Rs 6.5 lakh per employee). The cost of closure, as shown in Table 18, assumes that GoI would recover its long-term loans on closure of the company.

The surplus on closure (at the end of FY 2002-2003) is estimated to be Rs 130 Mn (as calculated above) + recovery of Govt. of India loans worth Rs 1423 Mn - Rs 1235 Mn for VSS payments to employees. Under such circumstances, the government is broadly estimated to have a net inflow of Rs 318 Mn on closure.

Needless to emphasise, this value is highly contingent on the realizable value of fixed and current assets. Fixed assets have been assumed by CRISIL Infrastructure Advisory, to have a realisable value of 50% while current assets have been assumed at 80 % of the book value.

13. It may be noted that since, at the time of submission of this report, the accounts for FY 2002-2003 had not been finalised by BVFC. .This cost of closure has been calculated based on the projecte financial statements for the FY 2002-2003.

The company also has contingent liability claims of Rs 2,980 Mn. Most of the dues (close to Rs 2,580 Mn) are claims by natural gas suppliers (OIL, ONGC and GAIL). However, according to company officials, the company is hopeful of settling the claims as the contract terms are in its favour. Moreover, GoI has intervened and is providing part compensation (upto Rs 535.2 Mn) to creditors of the company in return for absolving all claims on BVFCL.

There are wage revision claims on the company to the tune of Rs 1304 Mn over and above its contingent liability claims.

DISINVESTMENT CONSIDERATIONS

Since the prospects of the company do not seem to be bright, closure appears to be, prima facie, a better economic option. However, much depends on the interest of prospective buyers and the bids offered. In case of any anticipated synergy, bidders may offer high control premium to buy majority stake in BVFCL.

The company has had poor operational efficiency in the past with high energy consumption of about 20 Mkcal per MT of urea vis-à-vis 5 to 6 Mkcal per MT of urea for efficient plants. The combined capacity utilisation of its plants has never crossed 49% vis-à-vis over 100% capacity utilisation by efficient plants of other players in India. Further, the freight costs for the company are much higher than the freight subsidy provided by the government. This could be partly attributed to the poor availability of rail racks in the region and the resulting poor rail-road ratio. The above factors have led to high costs and continuing losses for the company since the past many years.

In order to help the company to operate despite continuing losses, Government of India has written off its loans worth over Rs 2269.5 Mn and is expected to write off the remaining long-term loans worth Rs 1303.8 Mn in the FY 2002-2003. Government has also approved a plan for investing a further Rs 5090 Mn in the company's plants for improving operational efficiency.

However, even after plant revamp, BVFCL's operations would not be at par with efficient plants. The company is expected to continue making losses in the future. Expected policy changes such as group concession scheme, partial

withdrawal of freight subsidy, and removal of dispatch restrictions on urea are likely to make the situation worse for the company.

Rationalisation of employee strength and financial restructuring that have been proposed may not be sufficient as they may not lead to substantial improvement in the profitability of the company as the main problem is with regard to operational efficiency of the company's plants. It is estimated that even after plant revamp, the contribution per MT of urea would require to be increased for achieving breakeven. This needs to be done through increased annual subsidy support to the company.

Given the expected poor demand growth situation, and the near sufficient supply situation, industry players are likely to add capacity in existing plants rather than look at investing huge amounts in new plants. Even if some players were to add new capacities by taking over existing companies/plants, there are better run plants which are on the block and closer to both gas supplies and markets. Such plants are likely to be preferred by investors.

However, since government policy has historically supported fertilisers production in order to make fertiliser available to farmers at cheap rates, closing the plant might also mean lowering of fertiliser supply, however marginal it might be. Moreover, since BVFCL is located in the sensitive north-east region of the country, its closure may not be the best option at this stage.

RECOMMENDATIONS

Under the circumstances explained, given BVFCL's history of losses and poor envisaged profitability, the Commission feels that there is no need for Government to control majority stake in the company. There are many private and cooperative sector players in the industry making the fertilizer sector fully competitive. Competition will ensure efficiency and price competitiveness in future. In order to bring in efficiencies by way of greater focus on value drivers, it is necessary to cede management control of BVFCL in favour of a strategic partner.

The Commission, therefore, recommends that GoI should disinvest up to 74% of its equity in BVFCL to a strategic partner through the competitive bidding route. The disinvestment should be concurrent with financial

restructuring and manpower rationalisation, details of which should be finalised in consultation with the prospective bidders. Government should retain at least 26% stake for a period of three years, after which this balance equity should also be sold. A final view on disinvestment or closure should be taken based on the response from prospective bidders and the highest bid price offered. In the absence of proper interest from bidders, closure/winding up of BVFCL is to be pursued.

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2.2 HOSPITAL SERVICES CONSULTANCY CORPORATION LIMITED (HSCC)

INTRODUCTION

HSCC was incorporated in March 1983 as a Government company under the administrative control of Ministry of Health & Family Welfare, Government of India. It specialises in providing healthcare consultancy services for setting up hospitals, laboratories and health care institutions. Following is a brief list of services provided by HSCC:

Conceptual Studies and Management Consultancy: Health care systems planning, feasibility studies, functional and spatial programmes, architectural and engineering plan and management consultancy;

Health-Care Facility Design: Conceptual & basic design, engineering design, equipment planning and design co-ordination;

Project Management: Pre-qualification and award of contract, project monitoring and cost control, construction supervision and contract administration;

Procurement: Drugs and pharmaceuticals, medical equipment, other equipment, information technology systems, appliances, furniture/fixtures and consumables;

Logistics and Installation: Equipment/medical goods transportation, site delivery, installation, commissioning and tracking.

HSCC is currently rendering/has rendered consultancy services, inter alia, for the following major projects: 500 bedded super speciality hospital for Indira Gandhi Regional Institute of Health and Medical Sciences at Shillong, Meghalaya (Project cost: Rs. 4230 Mn), construction of laboratory and animal house for National Institute of Biologicals at NOIDA (Project cost: Rs. 950 Mn), 300 bedded hospital complex at Itanagar (Project cost: Rs. 900 Mn), 500 bedded hospital for Dr. R. P. Medical College at Tanda, H.P. (Project cost: Rs. 500 Mn), 500 bedded hospital and medical college for Co-operative Academy of Professional Education at Kochi. (Project cost: Rs.440 Mn). Besides, HSCC

is providing procurement services, amongst others, for Reproductive Child Health Project (Project cost: 1030 Mn).

HSCC is a public limited company and is fully held by the Government of India. The company has an authorised share capital of Rs. 5 Mn, (50,000 equity shares of Rs. 100 each) and paid up equity capital is Rs. 40,00,300. As on 31.3.2002, HSCC had 120 employees on its roll.

It has been rated "Excellent" for the fifth time in succession by the Department of Public Enterprises in its MoU signed with the Ministry of Health & Family Welfare. As a mark of its recognition, the company was awarded the Prime Minister's Merit Certificate for its outstanding performance in the year 1998-99 and the H.E. Vice President MoU Award.for 1999-2000 and 2000-2001.

SECTOR ANALYSIS

Healthcare consultancy services is a subset of the healthcare industry. The healthcare industry in India is estimated at Rs. 730 Billion (Bn). The consultancy segment forms a very small part of the healthcare industry. Because of the unorganised and fragmented nature of the consultancy sector, it is difficult to precisely estimate the industry size.

HSCC had appointed a research agency to carry out healthcare review study, which estimated a total investment of about Rs. 180 Bn in the healthcare sector. Table below shows the details of investments in various segments. Based on these investment estimates, opportunities for healthcare consultancy services have been estimated at Rs. 7900 Mn over a period of six years (2001–2007).

Table 1 - Size of the Consulting Segment [2001–2007]

Opportunity area	Total Investment (Rs. Mn)	Share of consultancy fee (in tune with industry benchmarks)	Consulting component (Rs. Mn)
Hospital Projects	20000	5%	1000
Public Health	5000	5%	250
Training	40000	0.5%	200
Equipment	40000	5%	2000

...contd.

Opportunity area	Total Investment (Rs. Mn)	Share of consultancy fee (in tune with industry benchmarks)	Consulting component (Rs. Mn)
Certification	7500	0.5%	37.50
Optimisation (Hospitals)	6000	1%	60
Corporate – Hospital Chains + medical insurance	5000	5%	250
Development Sector - Supply Chain Management	50000	8%	4000
Joint Ventures	2000	5%	100
Total	**175500**		**7897.5**

Source: HSCC / CRISIL Infrastructure Advisory

Key players

Unlike other industries, the consulting segment in healthcare industry is still in nascent stages and is still evolving. Apart from a couple of organised players, there are a large number of small un-organised players. These would typically be small independent architect or IT firms. HSCC is one of the largest organised players in a fragmented industry, although accounting for only a small share of the market. The table below details a list of key players with their areas of expertise:

Table 2 - List of major players with their areas of expertise

Name of the entity	Areas of expertise	Estimated Turnover in Rs. Mn
HOSMAC, Mumbai	➢ Hospital projects architecture design ➢ Equipment & manpower planning ➢ Manpower training ➢ Project execution and commissioning of the hospital.	25
HOSPIC	➢ Hospital projects architecture design ➢ Equipment & manpower planning ➢ Manpower training	10

...contd.

Name of the entity	Areas of expertise	Estimated Turnover in Rs. Mn
Hospital Management and Consultancy Services	➢ Hospital projects architecture design ➢ Equipment & manpower planning ➢ Project execution and commissioning of the hospital.	N.A.
NOUS Hospital Consultants Private Limited	➢ Hospital projects architecture design ➢ Equipment & manpower planning ➢ Manpower training	N.A.
HSCC	➢ Government Hospitals ➢ Hospital projects architecture design ➢ Equipment & manpower planning ➢ Manpower training ➢ Project execution and commissioning of the hospital. ➢ ISO certification ➢ Equipment procurement for govt. hospitals ➢ Healthcare Grading in tie-up with ICRA ➢ Strategy consultancy services	150
Apollo Hospital Enterprise Limited – Project & Consultancy Division	➢ Hospital projects architecture design ➢ Equipment & manpower planning ➢ Manpower training ➢ Project execution and commissioning of the hospital ➢ Management of the hospitals	100
Kamle Consultants	➢ Hospital projects architecture design ➢ Equipment & manpower planning	N.A.
Kritikal Health Systems	➢ Hospital projects architecture design ➢ Equipment & manpower planning ➢ Project execution and commissioning of the hospital.	N.A.

Source: CRISIL Infrastructure Advisory

Key Success Factors for the Industry:

Skilled man-power: The health care consulting industry is a specialised knowledge-based industry, which could consist of consultants such as,

management consultants, doctors, architects, MEPS consultants (mechanical-HVAC, electrical, plumbing & sanitary services), biomedical engineers, software professionals, to name a few.

The ability to deliver high quality work, ensuring adherence to various standards (construction, medical norms) and assuring timely and quality delivery are the key attributes which would enable one to stay ahead in competition.

Quality and timely completion: The ability to complete contracts with respect to quality and timely delivery to clients would be a crucial factor for being successful in this industry.

Tie-ups with International Firms: Tie-ups with internationally established players would give a fillip, specifically while bidding for international mandates. It would not only enhance the entities' visibility amongst international clients but would also help in developing additional skill sets.

Competitive pricing: Given the entry of private players in the healthcare industry, the competition will be intense and clients more demanding. The ability to price competitively would give the much-needed advantage over rivals.

Full product offering: To stay competitive in the industry, an entire bouquet of services would have to be provided, which would include: feasibility studies, facility design, project management related activities, procurement and logistics and installation. This would also include specialisation in the fields of equipment planning, commissioning of health care institutions, system study and reengineering, operational troubleshooting, quality assurance, maintenance, manpower planning and human resource training, marketing of healthcare services, MIS evaluation, selection and its implementation etc.

Management ability: The quality of top management is yet another important factor for speedy and successful operation of a firm. To be effective, a management team must be able to navigate the company through a challenging, continually evolving environment and dealing with the investment community about the company's operating strategies and outlook.

Marketing network: Extensive networking and aggressive showcasing of the firms' capability drive a majority of the domestic/international mandates. This

involves extensive liaising and follow up. Hence, it is of utmost importance that a competent marketing network is in place. Besides, a stable order book also helps in prudent allocation and scheduling the tasks better.

The key success factors detailed above and the position of HSCC vis-à-vis those factors are indicated in the table below:

Table 3 - Mapping of industry success factors vis-à-vis HSCC

Key Success Factors	Position of HSCC
Skilled manpower	HSCC has the requisite technical expertise to undertake mandates but would need to expand its skill set base when dealing with private clients.
Quality and timely completion	HSCC's client base primarily consists of government/PSU entities to whom it has delivered quality work on time. However, this quality needs to be tested with private clients.
Tie ups with international firms	HSCC does not have tie-ups with international players. Tie ups with international firms to make inroads in new products/skill sets where no capability exists would be crucial while competing with private players.
Competitive pricing	Given its high manpower costs, HSCC may not be able to price competitively. Ability to price mandates would be a crucial element while bidding or private players.
Full product offerings	HSCC offers a range of products but would need to augment its offerings in training and implementation assistance.
Management ability	HSCC has been rated excellent in its MoU with the ministry consistently over the last 5 years. However, the management's ability to guide the company in a competing environment needs to be established.
Marketing network	HSCC would need to be more aggressive player while competing with private players, especially with those having a wider network.

Source: CRISIL Infrastructure Advisory

Key Trends in the Industry

As discussed earlier, hospital consultancy segment is a sub-set of the healthcare industry. The healthcare industry can be broadly segregated into:

- Pharmaceutical medical equipment, medical suppliers,
- Services,
- Education and Training, and
- Health system through NGOs.

Assuming these segments constitute the universe of services for the healthcare industry, the consulting component would be a small percentage (which would vary for each segment) of these segments. Hence, there is a direct correlation between the healthcare industry and the consultancy segment and any investment or expenditure in the healthcare industry directly impacts the quantum of the consulting business.

With global revenues of approximately US$ 2.8 trillion, the healthcare industry is perhaps the world's largest industry and India is emerging as a major player in this industry, because of its high population. India's healthcare industry is currently worth Rs 730 Bn, (FICCI estimates), which is roughly 5 - 6 percent of its GDP in 2001-02. The industry is expected to grow at the rate of 13 – 15% p.a.

As per the Insurance Regulatory and Development Authority (IRDA), the Indian healthcare industry has the potential to show almost the same exponential growth that the software and pharmaceutical industries have shown in the last decade.

In India, the per capita total health expenditure as a percent of national income is quite high. Almost two-thirds of this expenditure is attributed to the private sector. This reinforces the perception that private sector initiative in the health care sector is not only forthcoming but is also an essential complement to the efforts of the government. The following table details this in terms of sources and uses of national health spending:

Table 4 - National Health Spending: Sources and Uses

(Figures in %)

Uses	Central Govt.	State & Local Govt.	Corporate third party	Households	Total
Primary care	4.30	5.60	0.80	48	58.70

...contd.

Uses	Central Govt.	State & Local Govt.	Corporate third party	Households	Total
Secondary & Tertiary patient care	0.90	8.40	2.50	27	38.80
Non Service provision	0.90	1.60	NA	NA	2.50
Total	**6.10**	**15.60**	**3.30**	**75**	**100**

Source: Statistical Outline of India 2001-2002 CRISIL Infrastructure Advisory

- **Changing Demographic profile:** Improving overall health status and socio-economic pressures have led to a change in the country's demographic profile. As a result of the decline in birth rate, the proportion of population in the 0 – 14 age group has declined between 1991 and 2001 and is expected to decline further. Because of this, the proportion of population in the older age groups is expected to increase. Changing demographic structure, especially ageing, has important implications for demand of medical care. On an average, an increase in the proportion of the older population tends to result in higher per capita demand of health services. Also, the type of health services required also tends to change, with the illness distribution. The demographic profile and its changes have been shown in the table below:

Table 5 - Demographic Profile

Age Groups	1991	2001	2010
0-14	36%	35%	29%
15-54	55%	55%	59%
55 & above	9%	10%	12%

Source: Statistical Outline of India 2001-2002 / CRISIL Infrastructure Advisory

- **Increasing presence of corporate sector and private healthcare insurance operators:** Large corporates have entered into hospital sector, such as Ranbaxy, Max, Hiranandani, Paras pharma, Reliance and Birla, apart from existing corporate groups such as Escorts, Apollo, Wockhardt, etc. Entry of private players like ING and ICICI Prudential in the healthcare insurance is likely to set new benchmarks in the industry.

- **Increasing concerns about the quality of care:** The necessity, appropriateness and efficiency of care delivered by existing medical care facilities are increasingly under question The problem is further aggravated by lack of regulation and institutional pressure to lower cost per illness episode, which has highlighted the need for some form of quality checking mechanism, either by way of licensing or by accreditation. There has been increasing interest in the latter with a number of bodies having already launched an accreditation service.

- **Shift towards a one stop shop concept:** Increasingly, a large number of hospital consultancy firms have started offering the entire bouquet of services, which ranges from, architectural planning, project management services, management consultancy, logistics and installation to implementation assistance.

Institutional Framework for the Sector

The Union Ministry of Health and Family Welfare is instrumental and responsible for implementation of various programmes of national importance like family welfare, prevention and control of major diseases etc, which form the main plank of its developmental efforts. Apart from these, the Ministry also assists states in preventing and controlling the outbreak and spread of epidemics through technical assistance.

In addition to centrally sponsored schemes, the Ministry has formulated and is implementing various World Bank assisted projects for the control of various diseases. The State Health System Projects are implemented through state governments though the Department of Health, Ministry of Health and Family Welfare, GoI has facilitated the states in availing of external assistance.

The Union Ministry of Health and Family Welfare comprises the following departments: Department of Health, Department of Family Welfare, and Department of Indian Systems of Medicine & Homeopathy.

The Directorate General of Health Services (DGHS), a repository of technical knowledge, is an attached office of this Ministry. The DGHS also renders technical advice on all medical and public health matters and in implementation of various health schemes.

Further, in order to implement policies and programmes of the Ministry in an effective manner, there are three subordinate offices located in different parts of the country. The Ministry is also administratively concerned with 29 autonomous/statutory bodies. There are also three public sector undertakings under the administrative control of the Ministry.

OPERATIONS OF HSCC

HSCC's business mix for the last five years is shown in the table below:

Table 6 - HSCC's business profile

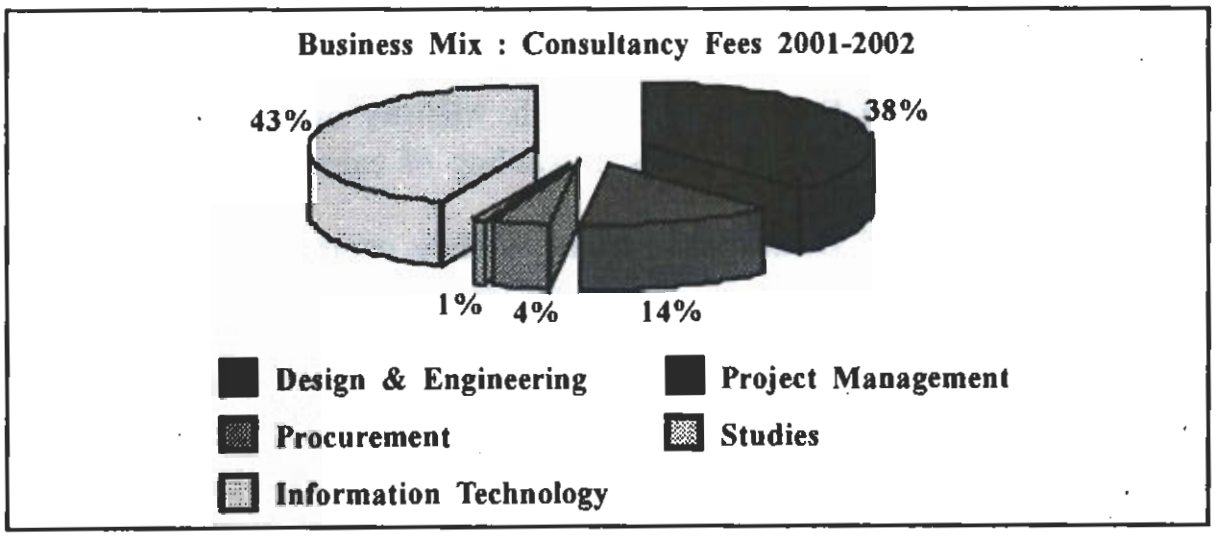
(Rs. Mn)

Year ending March 31	2001-2002	%	2000-2001	%	1999-2000	%	1998-1999	%	1997-1998	%
Consultancy fee	150.70	64.27	101.36	57.3	82.00	58.23	50.80	52.19	28.39	38.93
Other Income	83.78	35.73	75.58	42.7	58.80	41.77	46.54	47.81	44.54	61.07
Total	**234.48**	**100.0**	**176.94**	**100.0**	**140.8**	**100.0**	**97.34**	**100.0**	**72.93**	**100.0**

Source: CRISIL Infrastructure Advisory

HSCC is the preferred consultant for all government/PSU projects.

A brief profile of its business mix in the year 2001-2002 is detailed below. As seen from the figure, Design & Engineering and Information Technology constituted a significant portion of its business mix in 2001-2002.



Source: CRISIL Infrastructure Advisory

The typical process followed by HSCC in procuring mandates is that the client (government/PSU entities) informs HSCC on the project related details. HSCC readies the technical details/specifications for the projects and submits a financial fee quote. The fee is finally subject to negotiations and is mutually agreed on by both the parties.

The government/PSU business constitutes about 90 % of its business revenues, of which the procurement business roughly constitutes 5-7%. HSCC has executed very few mandates for private clients/international customers. Though it has undertaken studies in Afghanistan, Mauritius, etc, a majority of them seem to be undertaken by virtue of its association with the Ministry of Health and Family Welfare.

FINANCIAL PERFORMANCE

Table below shows the summarised Profit & Loss account of HSCC for five years, during the period 1997-98 to 2001-02:

Table 7 - Profit & Loss Account of HSCC

	2001-2002		2000-2001		1999-2000		1998-1999		1997-1998	
	Rs. Mn	% of OI	Rs. Mn	% of OI	Rs. Mn	% of OI	Rs. Mn	% of OI	Rs. Mn	% of OI
Income from Operations:										
Net Sales (Consultancy fees)	150.71	98.15	101.36	97.24	82.10	97.15	50.80	100.0	28.39	100.0
Other related income	2.85	1.85	2.87	2.76	2.41	2.85	-	-	-	-
Operating Income	**153.55**	**100.00**	**104.24**	**100.00**	**84.50**	**100.00**	**50.80**	**100.0**	**28.39**	**100.0**
Expenditure:										
Employee Costs	36.93	24.05	28.21	27.06	38.44	45.48	37.21	73	33.03	116
Professional charges	12.05	7.85	7.44	4.85	4.22	2.75	-	-	-	-
Power & Fuel Costs	1.10	0.72	0.67	0.64	0.54	0.63	0.50	1	0.48	2
Other Project Expenses	3.61	2.35	2.17	2.08	4.01	4.75	2.16	4	1.63	6
Selling Expenses	2.57	1.67	1.94	1.86	1.01	1.20	2.21	4	0.37	1
Other Expenses	14.77	9.62	12.07	11.58	8.00	9.46	7.51	15	7.43	26
Cost of Sales	**71.03**	**46.26**	**52.49**	**50.36**	**56.21**	**66.52**	**49.59**	**98**	**42.94**	**151**
OPBDIT	82.52	53.74	51.74	49.64	28.29	33.48	1.21	2	-14.55	

...contd.

	2001-2002		2000-2001		1999-2000		1998-1999		1997-1998	
	Rs. Mn	% of OI	Rs. Mn	% of OI	Rs. Mn	% of OI	Rs. Mn	% of OI	Rs. Mn	% of OI
Interest and Finance Charges	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
OPBDT	82.52	53.74	51.74	49.64	28.29	33.48	1.21	2	-14.55	
Depreciation	5.91	3.85	5.15	4.94	4.58	5.42	4.43	9	4.59	16
OPBT	76.60	49.89	46.60	44.70	23.71	28.06	-3.22		-19.14	-67
Non-operating Income	80.47	52.41	67.16	64.43	55.69	65.90	46.54	92	44.54	157
Cash Adjustments	6.35	4.13	12.05	11.56	5.67	6.71	5.20	10	-0.09	
APBT	163.43	106.43	125.81	120.70	85.07	100.67	48.52	96	25.31	89
Tax	59.00	38.42	50.00	47.97	41.80	49.47	22.30	44	17.46	62
PAT	**104.43**	**68.01**	**75.81**	**72.73**	**43.27**	**51.21**	**26.22**	**52**	**7.85**	**28**
Equity Dividend	21.00		16.79		10.19		5.86		1.76	
Accretion to Reserves	83.42		59.02		33.09		20.36		6.09	
Net Cash Accruals	89.34		64.16		37.66		24.79		10.68	

Source: CRISIL Infrastructure Advisory

The following paragraphs explain the elements of the Profit & Loss statement in detail:

Turnover Growth

Table 8 - Turnover Growth at HSCC

(Rs.Mn)

Year ending March 31	2001-2002	2000-2001	1999-2000	1998-99	1997-98
Operating Income	150.71	101.36	82.10	50.80	28.39
Other related Income	2.85	2.87	2.41	—	—
Total Income	**153.55**	**104.24**	**84.50**	**50.80**	**28.39**

Source: CRISIL Infrastructure Advisory

Operating income at Rs. 150.71 Mn registered a 50% growth in 2001-2002 over 2000-2001. The growth has primarily been driven by higher turnover in Information Technology systems, which contributed close to 40% for the year 2001-2002.

A significant portion of its non-operating revenues for the last three financial years is derived from interest on deposits with banks.

Employee Costs

Table 9 - Employee Costs

	2001-2002	2000-2001	1999-2000	1998-99	1997-98
No. of Employees	120	100	94	89	88
Employee Costs (RsMn)	36.93	28.21	38.44	37.21	33.03
As % of Operating Income	24.05	28.21	45.48	73	116

Source: CRISIL Infrastructure Advisory

HSCC had 120 employees on its rolls as of 31st March 2002, with employee costs accounting for approximately 24% of operating income in 2001-02, as compared to 12% for Apollo Hospitals Enterprise Ltd. Further reduction in employee costs (as a % of operating revenues) could perhaps be achieved by enhancing productivity. The technical to non-technical staff ratio at HSCC is 70:30.

The table below details the number of employees vis-à-vis turnover, employee costs and operating profits:

Table 10 - Employee related parameters

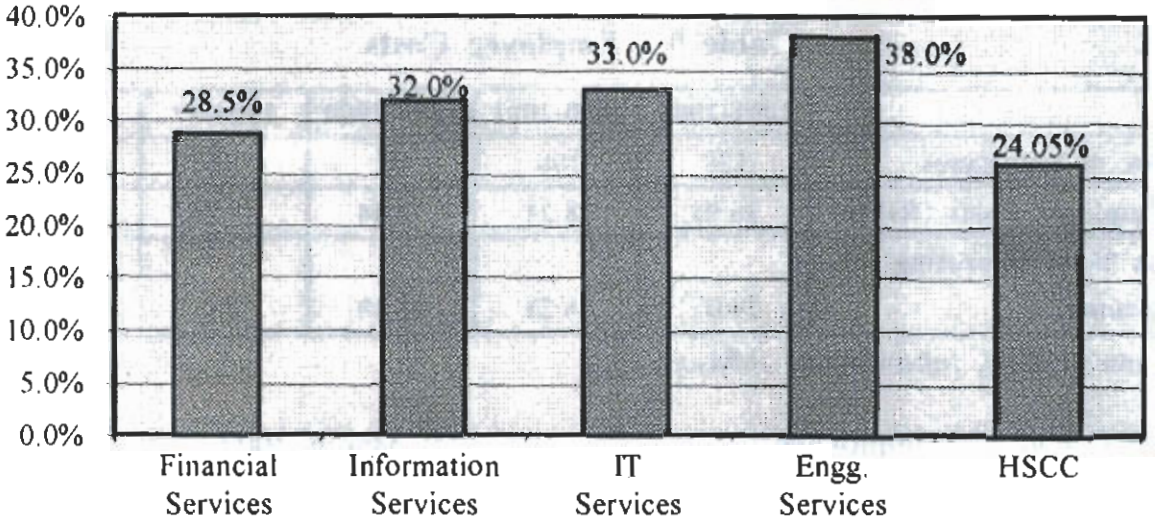
	2001-2002	2000-2001	1999-2000	1998-1999	1997-1998
Number of Employees	120	100	94	89	88
Turnover/Employee (in Rs. Mn)	1.28	1.042	0.899	0.571	0.322
Employee Costs/Employee (in Rs. Mn)	0.308	0.282	0.409	0.418	0.375
Operating Profits per/ Employee (in Rs.Mn)	0.688	0.517	0.301	0.013	-0.016

Source: CRISIL Infrastructure Advisory

The operating profit per employee in 2001-2002 has risen as compared to that in 1999-2000 owing to a substantial increase in operating profits, which can be attributed to a more than proportionate growth in turnover.

In the chart below, employee costs of HSCC have been compared with those for other services.

Comparison of Employee Costs as percentage of sales



Source: CRISIL Infrastructure Advisory

Note: For the purpose of this analysis, the companies considered are: Financial Services [Credit Rating Information Services of India Limited and ICRA Ltd.], Information Services [Dataline & Research Technologies (India) Ltd., Intelligent Communication Systems India Ltd., M C S Ltd., Vans Information Ltd.], IT Services [Zensar Technologies Ltd., Hughes Software Systems Ltd., Boston Education & Software Technologies Ltd., CMC Ltd.] and Engineering Services [Central Mine Planning & Design Institute Ltd., Geologging Industries Ltd., National Industrial Devp. Corp. Ltd., RITES Ltd., Engineers India Ltd., IRCON International Ltd., MECON Ltd.].

It can be noted that the employee costs (as a percentage of sales) at HSCC are lower in relation to other services firms, but higher than competing firms like Apollo Hospitals Enterprise Ltd.

Professional charges

Table 11 - Professional charges as a percentage of Operating Income

Financial Year	2001-2002	2000-2001	1999-2000
Professional Charges (RsMn)	12.05	7.44	4.22
As % of Operating Income	7.85	4.85	2.75

Source: CRISIL Infrastructure Advisory

Professional charges for the financial year 2001-2002 recorded a 63 % jump over 2000-01. The amounts paid towards professional charges are primarily charges paid towards internal audits and fees payable towards hiring of external consultants for the design and engineering contracts.

Hiring of external consultants can be attributed to bolstering the skill set pool and balancing the work-load on the team. Private clients are increasingly seeking commissioning and implementation assistance as an extension of the design and engineering studies, and hence HSCC would have to build/acquire those skill sets to compete with the private players.

Other Project Expenses

These expenses consist of the following

- Repairs to building and plant and machinery
- Insurance

Repairs to buildings, and plant & machinery have been a major component under the head of other manufacturing expenses for the financial years 2001-02, 2000-2001, and 1999-2000.

For the financial year 2001-2002, these expenses relating to buildings and plant & machinery recorded a 75% jump over those of the previous year on account of construction of an additional floor and other ancillary expenses related to it. Other project expenses as a percentage of operating income have remained stable at around 2.5%.

Selling Expenses

Selling expenses comprising primarily advertising, publicity expenses and business promotion expenses at Rs. 1.09 Mn, during 2001-2002 more than doubled over those of Rs. 0.51 Mn in 2000-2001. This sharp increase during 2001-2002 was mainly accounted for by business promotion and entertainment expenses which stood at Rs.0.85 Mn, a 100% increase from previous year's Rs.0.47 Mn.

Other Expenses

Other expenses for the year 2001-02 were Rs.14.77 Mn including Rs. 0.21 Mn of expenses for Research and Development on developing effluent treatment schemes for health care establishments.

Approximately 30% of the other expenses are incurred on vehicles and telephone charges, including expenses incurred for the Ministry. The balance are on account of travelling and printing and stationery expenses.

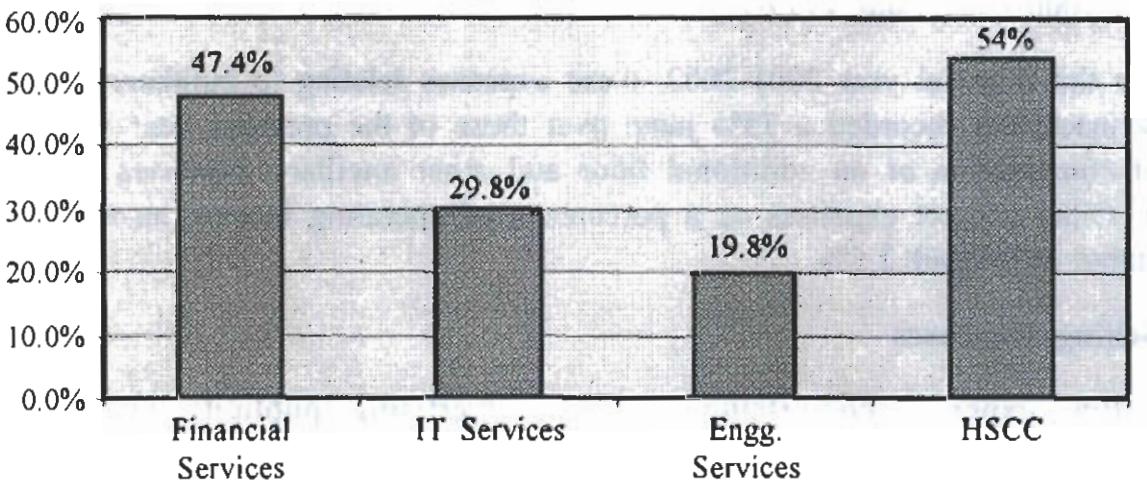
Operating Margin

Higher expenses in 1999-2000 can be attributed to higher employee costs and provisioning for liquidated damages in that year.

Operating margins for the FY 2001-2002, 2000-2001, and 1999-2000 were 53.74%, 49.64% and 33.48% respectively. The marginal increase in the operating margins for the year FY 2001-2002 over FY 2000-2001 can be attributed to 50% increase in operating income.

The following chart shows a comparison of the operating margins of HSCC vis-à-vis those of other industries:

Operating Margins: Comparison with Industry [Year: 2001-2002]



Source: CRISIL Infrastructure Advisory

It can be noted that operating margins for HSCC are the highest in the industry as compared to companies in broadly a comparable spectrum.

Interest and Finance charges

HSCC does not have any debt on its books and hence it does not incur any interest and finance charges for the same.

Depreciation expenses

Depreciation expenses on owned assets for the financial years 2001-2002, 2000-2001 and 1999-2000 were Rs. 5.91 Mn, Rs. 5.15 Mn and Rs. 4.58 Mn respectively. Depreciation expenses are in norm with the industry average.

Non-Operating income

The company has a robust cash and bank balance to the tune of Rs. 1258.43 Mn. This primarily includes deposits with banks and deposits held on behalf of Ministries. The non-operating income increased significantly from Rs. 55.69 Mn in 1999-2000 to Rs. 67.16 Mn in 2000-2001 and further to Rs. 80.47 Mn in 2001-2002. Non-operating income as a percentage of operating income was on an average 55% for the last three years.

Tax

The company has a long tax paying history and has been paying taxes at close to the marginal corporate tax rate in India. It paid a tax of Rs. 59 Mn on a pre tax income of Rs. 157.08 Mn, which is a tax payout rate of 37.56%. The tax payout increased marginally from Rs. 50 Mn in 2000-2001 to Rs. 59 Mn in 2001-2002.

Net Profits

Higher operating profits and the increase in non-operating income resulted in an increase in net profits from Rs. 75.81 Mn in 1999-00 to Rs. 104.43 Mn in 2001-2002. Net profit of Rs.104.43 Mn in 2001-2002 includes significant level of non-operating income to the tune of Rs.80.47 Mn.

The increase in expenses for the year 2001-2002 has been offset by a more than proportionate increase in operating income and a strong growth in non-operating income.

Dividend

Table 12 - Dividend Payout rate

(Rs.Mn)

	2001-2002	2000-2001	1999-2000	1998-99	1997-98
Dividend	21.00	15.24	8.8	5.28	1.60
Equity	4.00	4.00	4.00	4.00	4.00
Dividend Payout rate	**525%**	**381%**	**220%**	**132%**	**40%**

Source: CRISIL Infrastructure Advisory

The company has been consistently paying dividends for the past seventeen years. It has declared a record dividend of Rs. 21 Mn for the FY 2001-2002. The dividend payout ratio in 2001-2002 was 525% as compared to 381% in 2000-2001 and 132% in 1998-1999.

Balance Sheet

Summarised Balance Sheet of HSCC for the years 1997-98 to 2001-2002 is shown in the table below:

Table 13 - Balance Sheet of HSCC

(Rs.Mn)

BALANCE SHEET (as of March 31)	2001-2002	2000-2001	1999-2000	1998-99	1997-98
Liabilities					
Share Capital	4	4	4	4	4
Reserves & Surplus	217.60	134.17	75.15	42.07	21.59
Networth	221.60	138.17	79.15	46.07	25.59
Total Debt	0	0	0	0	0
Current Liabilities & Provisions	1293.42	1118.17	1612.72	1657.21	322.71
Current Liabilities	1259.49	1088.76	1584.24	1637.30	313.68
Provisions	33.93	29.41	28.48	19.91	9.03
Total Liabilities	**1515.02**	**1256.34**	**1691.87**	**1703.28**	**348.30**

...contd.

BALANCE SHEET (as of March 31)	2001-2002	2000-2001	1999-2000	1998-99	1997-98
Assets					
Gross Block	69.29	54.81	50.07	44.17	41.04
Net Fixed Assets	43.23	34.75	33.92	31.66	33.10
Investments	0	0	0	0	0
Current Assets	1471.79	1221.59	1657.95	1671.62	315.20
Total Assets	**1515.02**	**1256.34**	**1691.87**	**1703.28**	**348.30**

Source: CRISIL Infrastructure Advisory

The following paragraphs explain the key elements of the Balance Sheet in detail.

Net Worth

HSCC has an authorised share capital of Rs. 5 Mn. Against this, the paid up share capital was about Rs.4 Mn as of March 31, 2002.

HSCC has been consistently making profits for the last 10 years. Its reserves & surplus were Rs. 217.6 Mn in 2001-02, Rs. 134.17 Mn in 2000-2001 and Rs. 75.15 Mn in 1999-2000.

Total Debt

The company does not have any term loans on its books. It also does not have any short-term debt on its books and has not taken any loans for the past five years.

Fixed Assets and Investments

The company's gross block as of March 31, 2002 stood at Rs. 69.29 Mn and net fixed assets at Rs. 43.23 Mn. Fixed assets are stated at cost in the company's balance sheet and the company has not undertaken any revaluation of assets.

Table 14 - Gross Block of HSCC

(In Rs. Mn)

Asset	2001-2002	2000-2001	1999-2000	1998-99	1997-98
Land – Leasehold	5.75	5.75	5.75	5.75	5.75
Buildings on leasehold land	18.17	12.10	12.10	10.69	10.64
Flats	2.95	2.89	2.89	2.88	2.89
Furniture & Fixtures	7.4	5.78	5.11	4.09	3.66
Electrical Appliances	10.33	5.59	5.26	5.20	5.10
Air Conditioners/Cooling	4.47	3.94	3.88	3.13	2.69
Office Equipments	2.82	2.71	2.15	1.92	1.89
Vehicles	1.38	1.36	1.37	1.12	0.70
Computers	16.02	14.69	11.56	9.39	7.72
Total	**69.29**	**54.81**	**50.07**	**44.17**	**41.04**

Source: CRISIL Infrastructure Advisory

The company has not undertaken any significant capex on projects in the recent past.

Current Liabilities and Provisions

Current Liabilities

The company's current liabilities for the year 2001-02 were Rs. 1259.49 Mn, as against Rs. 1088.76 Mn in 2000-2001, as shown in the table below. The decrease in liabilities is primarily on account of decrease in advances from customers.

Table 15 - HSCC Current Liabilities & Provisions

(Rs. Mn)

As of March 31	2001-2002	2000-2001	1999-2000	1998-99	1997-98
Advances from Ministry	682.07	607.92	1049.63	1488.33	197.70
Creditors for goods	477.53	379.05	423.32	67.17	53.18
Deposits from Customers	93.34	98.10	105.59	79.50	61.61

...contd.

As of March 31	2001-2002	2000-2001	1999-2000	1998-99	1997-98
Other Current Liabilities	6.55	3.69	5.70	2.30	1.19
Provisions	33.93	29.41	28.48	19.91	9.03
Total Current Liabilities & Provisions	**1293.42**	**1118.17**	**1612.72**	**1657.21**	**322.71**

Source: CRISIL Infrastructure Advisory

As can be noted, HSCC receives substantial amounts from the Ministry of Health and Family Welfare for its procurement contracts. It also receives a significant amounts as advances from its creditors.

Other Current Liabilities and Provisions

Deposits from customers were in the range of Rs.93.3 Mn to Rs.105.6 Mn during the last three years ending with March 31, 2002.

The company makes adequate provision for taxes and dividend payable. In addition, it also makes provisions for dues payable to employees on account of Leave Encashment. The total provisions were Rs. 33.93 Mn as on 31st March, 2002.

The company has been providing for doubtful debts of greater than 6 months. The provision for doubtful debts greater than 6 months in 2001-02 were relatively modest at Rs. 0.57 Mn.

Current Assets

HSCC has substantial current assets, as shown in the table below:

Table 16 - Current Assets of HSCC

(Rs. Mn)

As of March 31	2001-2002	2000-2001	1999-2000	1998-99	1997-98
Receivables	29.82	44.44	58.60	1.31	13.81
Loans & Advances:					
Current assets related to operations	115.83	167.53	12.19	8.24	4.48

...contd.

As of March 31	2001-2002	2000-2001	1999-2000	1998-99	1997-98
Current assets not related to operations	67.70	39.09	62.26	25.59	10.67
Cash & Bank balances	1258.44	970.53	1524.90	1636.48	286.24
Total Current Assets	**1471.79**	**1221.59**	**1657.95**	**1671.62**	**315.2**
Current Assets as a % of Total Assets	97%	97%	97%	98%	90%

Source: CRISIL Infrastructure Advisory

As per the company's annual report, balances of receivables, loans and advances, deposits and claims receivable are subject to confirmation.

Cash and bank balances comprised 80% of the total assets on an average for the past three years. The Debtors to Sales days were 72 days in 2001-02, 160 days in 2000-01 and 260 days in 1999-00. Typically, Debtors to Sales days in service firms are around 70 days. Hence, HSCC's Debtors to Sales days for 2001-02 are in line with industry average.

Key Operating Ratios

Table 17 - Key Operating Ratios of HSCC

RATIOS		2001-2002	2000-2001	1999-2000	1998-99	1997-98
Profitability Ratios:						
OPBDIT/Operating Income	%	53.74	49.64	33.48	2.4	-51.3
PAT/Net Income	%	68.01	72.73	51.21	51.6	27.7
PBIT (Total Debt + Tangible Networth)	%	34.60	33.70	30.0	-7	-74.8
PAT/Tangible Networth	%	47.12	54.87	54.67	56.9	30.7

Source: CRISIL Infrastructure Advisory

HSCC is a dominant player in the industry. Due to its unorganised and fragmented nature, the industry consists of small and regional players and hence, there are no exactly comparable companies in the industry.

HSCC's operating and net margins are better than industry average. This has become possible, to a large extent, by the sizable interest income earned on

substantial cash balances left by the Ministry with the company. Efficient working capital management also resulted in lower capital employed and consequent high return ratios.

Future Investments and Funding Plan

Requirements of Funds

In the service industry, the capital expenditure plans are relatively less than in other manufacturing entities, while skill/expertise development plays a key role. Future capex requirements are expected to follow past trends.

Sources of Funds

The company has consistently reported profits over the past years and has a cash balance of Rs. 1,258.44 Mn as of March 31, 2002. This includes deposits worth Rs. 804.19 Mn, which bring interest income. Interest on deposits with banks for the year March 31, 2002 was Rs. 79.83 Mn. Its annual cash accrual has been around Rs. 65 Mn for the last two years.

Given the healthy financial performance of the company over the past few years, it is expected that the company will be able to raise from the market debt funds for its projects as and when required.

Off Balance Sheet Items

The company has not recognised the following contingent liabilities as on 31st March, 2002:

- Claims to the tune of Rs. 0.75 Mn
- Letter of credit established with banks on behalf of ministries/clients to the tune of Rs. 34.60 Mn.

BUSINESS PLAN

Turnover Growth

The company has projected increasing its turnover from current levels to around Rs. 500 Mn by 2006-2007. The following table details its segment wise projected turnover:

Table 18

(Rs.Mn)

Years	Hospitals and project procurement	Interest income	New business Areas	Total
2002-2003	159.00	26.00	15.00	**200.00**
2003-2004	200.00	15.00	40.00	**255.00**
2004-2005	250.00	10.00	65.00	**325.00**
2005-2006	310.00	10.00	85.00	**405.00**
2006-2007	385.00	10.00	105.00	**500.00**

Source: CRISIL Infrastructure Advisory

Its projections for hospitals and procurement income and from new business areas seem to be somewhat ambitious, given the fragmented and competitive nature of the industry.

SWOT ANALYSIS OF HSCC

Strengths

- Ability to complete contracts on a timely basis;
- Ability to offer a comprehensive range of services, viz; studies, architectural planning, project management, and recruitment and training;
- Healthy balance sheet – HSCC is a zero debt company and would be able to raise finances on its own by virtue of having a strong balance sheet.

Weaknesses

- Inability to develop order book of significant size by the business development/marketing;
- Dependence on public sector organisations and government hospitals for obtaining orders;
- Lack of experience in rendering assistance for private sector clients;
- Productivity levels do not appear to be very satisfactory, as compared to private players;

- Inability to develop adequate skill sets in Designing and Engineering and Commissioning and Implementation assistance;
- Inability to offer competitive pricing of services to customers vis-à-vis the private players, viz; HOSMAC and Apollo Hospitals.

Opportunities

- Healthcare is a Rs. 730 Bn industry, growing at 13-15 % p.a. (FICCI estimates);
- Sector recognised as industry and hence eligible for funding from Financial Institutions;
- Immense opportunities in medical education and training;
- Entry of private players in the health insurance market to set new benchmarks and offer vast opportunities.

Threats

- Entry of corporates like Wockhardt, Ranbaxy and Lupin would alter the dynamics of the industry;
- Any change in the current procurement policy of the Ministry of Health & Family Welfare would unfavourably impact HSCC;
- Government business is moving to private players.

Market Assessment

The healthcare industry has made substantial strides in recent years and, as mentioned earlier, is expected to grow 13 -15% p.a. Since the consulting segment is a sub set of the healthcare industry, there is immense potential for its growth. Apart from a couple of organised players, viz; HSCC, AHEL, HOSMAC, HOSPIC, etc, there are a large number of small un-organised players.

Operational Assessment

HSCC's current client mix predominantly consists of government/PSU entities. They account for close to 90% of its revenues. Its skill sets and ability to

deliver quality output on time to private clients is not competitively tested. Another important aspect that needs attention is its ability to bid competitively with private players, where its manpower costs and productivity levels could be a cause for concern. Its ability for business development to compete with private sector in products offerings and price require to be tested.

HSCC enjoys operating margins of around 50% mainly because of its hold over government/PSU entities.

Financial Assessment

The company's financial position is strong given that it does not have any debt on its books. Its number of days' sales outstandings for the year 2001-2002 was 72 days as compared to 160 days in 2000-2001.

The company has huge cash reserves to the tune of Rs. 1200 Mn, of which 50% is held on account of the Ministry of Health & Family Welfare.

DISINVESTMENT CONSIDERATIONS

HSCC is a consistently profit making entity. However, the services provided by it are not strategic in nature. With its accumulated experience, there is good possibility for HSCC to become an important player in this sector, measured by competitive and international standards. Besides, the following factors should be kept in mind:

- In the healthcare-consulting sector, there is enough competition from the private sector. Hence, there is no pressing need for a public sector enterprise to be present to prevent market manipulation.

- Private sector can bring in efficiencies by way of greater focus on key value drivers relevant to HSCC and enhance its operational and financial performance.

Government ownership restricts the ability of HSCC to bid for multilateral procurement assignments, where government ownership often leads to disqualification.

In order to bring in competitive efficiencies, it would be desirable to cede management control in favour of a suitable private investor. However, since a

significant proportion of HSCC's business arises from government clients, it is necessary to protect the cashflows of the company from sudden erosion. Also, to benefit from an upside by HSCC's presence in the steadily growing healthcare sector, it would be desirable for Government of India to retain a part of its stake in HSCC.

The potential buyers of the GoI stake could be hospital service consulting firms, hospital companies, other healthcare providers or even a venture capital firm. The strategic partner could also be a legal entity formed by the employees themselves. The possibility of a management-employee buy-out should also be explored in this case, given the skill-set-intensive nature of this sector. Ministry of Disinvestment in its OM No.4/38/2002/DD.II dated 25th April, 2003 has issued clear guidelines for management-employee bids in strategic sale.

RECOMMENDATIONS:

Under the circumstances, the Commission recommends that government should disinvest 51% of its equity stake in HSCC through the competitive bidding route to a strategic partner, with transfer of management control, while retaining 49% stake in the company for a period up to five years. Before offering the stake for disinvestment, the surplus cash should be withdrawn from HSCC. After five years, the balance 49% stake should also be disinvested.

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2.3 NATIONAL SEEDS CORPORATION LIMITED (NSCL)

INTRODUCTION

National Seeds Corporation Ltd. (NSCL) was established in 1963 with the aim of streamlining and promoting healthy development of seed industry in India, initiating measures leading to production of high quality seeds. The main objectives of the company are:

- production of breeder, foundation, certified and labelled seeds of a wide range of field and vegetable crops;
- installation and operation of seed processing plants and seed storage structures;
- operation of a wide seed marketing/ distribution network;
- undertaking exports and imports of seeds;
- executing an intensive and effective seed quality control system/ mechanism; and
- maintaining a buffer stock of seeds of principal crops.

In addition to these activities, it has also assisted in setting up seed processing plants, creating a core of private producers and in the training of individuals involved in seed production programme.

The main activity of NSCL is production and sale of different varieties of quality seeds. The main product is "Seeds and planting material". NSCL sources the basic raw material i.e. breeder seeds from both Indian Council of Agricultural Research (ICAR) and state agriculture universities (SAUs). The foundation and certified seeds are procured from contract growers out of production organised by NSCL through them.

The authorised and paid-up share capital of NSCL as on March 31 2002, were Rs.210.00 Mn and Rs.206.19 Mn respectively. The paid-up capital of the company includes Rs.86.39 Mn received from GoI for investment in state seed corporations (SSCs). NSCL is a private limited company wholly owned by GoI and is under the administrative control of the Department of Agriculture & Co-operation (DAC), Ministry of Agriculture (MoA). Headquartered in New Delhi,

NSCL has regional offices in 11 cities. As on 31.3.2002, the company had 925 employees on its roll.

INDUSTRY REVIEW

Agriculture in India

Indian agriculture has seen a gradual transformation since independence. From food shortages and imports in 1960s, the country has moved towards self-sufficiency and export. Agriculture and allied activities accounted for about 25% of the GDP of the country in FY 2001-2002.Though the share of agriculture in GDP has declined from 31% in FY 1993-94 to 25% in FY 2001-2002, the growth in GDP continues to have a strong correlation with the performance of the agricultural sector.

Agriculture provides employment to around 65% of the total workforce. The share of agricultural products in the total export earnings (US $ 5,871.1 Mn –13.4% for FY 2001-2002) is also substantial. Exports of agricultural products stood at US $ 3,489 Mn during the period April-October 2002, accounting for 11.9% of total exports for the period.

Out of 107 Mn farming families in India, about 83 Mn belong to small and marginal categories.

Food grains and oilseeds

The production of foodgrains, area under foodgrains cultivation and the yield per hectare for the period 1980-81 to 2002-2003 are given in the table below:

Table 1- Foodgrains

	Year					CARG (%)	
	2002-2003	2001-2002*	2000-2001	1990-1991	1980-1981	1981-1991	1991-2001
Production (Mn. MT)	184.1	211.17	195.92	176.39	129.59	3.49	1.17
Area (Mn hectares)	N/A	122.55	119.78	127.84	126.67	0.10	-0.72
Yield (Kg per hectare)	N/A	1723	1636	1380	1023	3.38	1.91

** Advance estimates as on 05.04.2002*

Source: Department of Agriculture & Coperation (DAC), Ministry of Agriculture (MoA) Credit Analysis & Research Ltd. (CARE)

The production and yield per hectare have shown a declining growth rate in the period 1991-2001 over the period 1981-91. There has also been a decrease in area under cultivation of foodgrains over the period under consideration. Though India is one of the largest producers of foodgrains, the yield per hectare compares poorly with that of major agriculture producers in the world. The inadequate spread of new technological practices including use of High Yielding Varieties (HYV) of seeds, the small size of farms and inadequate irrigation facilities are some of the reasons for relatively lower yield in comparison with international standards.

The production of oilseeds, area under oilseeds cultivation and the yield per hectare between the period 1980-81 to 2002-2003 are shown below:

Table 2 - Oilseeds

	Year					CARG(%)	
	2002-2003#	2001-2002@	2000-2001	1990-1991	1980-1981	1981-1991	1991-2001
Production (Mn MT)	15.57	21.16*	18.40	18.61	9.37	7.92	-0.13
Area (Mn hectares)	21.01	23.32	23.25	24.15	17.60	3.58	-0.88
Yield (Kg per hectare)	741	907	791	771	532	4.21	0.77

@ Advance estimates as on 05.04.2002

* Fourth Advance estimates as on 27.06.2002 estimate production at 20.73 Mn MTs. #Estimate according to monthly review of Indian Economy, CMIE April-2003. Since figures for FY 2002 and FY 2003 are estimates, computation of CARG has been restricted to the period 2000-2001

Source: DAC,MoA / CARE

All the parameters have shown a negative or declining trend in the period 1991-01 compared to the period 1981-91.The domestic production of oilseed is lower than the demand. The current demand for edible oils is around 11 Mn MT annually as against a domestic supply of around 7 Mn MT. Out of total agriculture imports for the period April-October 2003, valued at $1500 Mn, edible oil import alone accounted for 63% ($940 Mn) of the total. Production of oilseeds has not increased over the years due to factors like lack of genetic advancement in technology in evolving high productivity seeds, compulsion of raising oilseeds on unirrigated land (80% of area) and low productivity per hectare as compared to that of food grains.

Horticultural Crops

The production and area under cultivation of horticultural crops for the period 1999-00 to 2001-2002 are shown in the table below:

Table 3 - Horticultural Crops

(Area: Mn hectares: Production: Mn MT)

Crop/Year	2001-2002		2000-2001		1999-2000	
	Area	Production	Area	Production	Area	Production
Fruits	3.95	46.80	3.89	45.37	3.80	45.50
Vegetables	6.89	96.54	6.25	93.92	5.99	90.83
Others^	5.70	4.61	5.53	4.51	N.A	6.03
Total	**16.54**	**147.95**	**15.67**	**143.80**		**142.36**

^ others include flowers, spices, cashew nut, arecanut, coconut and other horticultural crops.

N.A: Not Available.

Source: Economic Survey 2002-2003 / CARE

As is evident from above, production as well as the area under cultivation of horticultural crops have grown over the period under consideration. India has emerged as the largest producer of coconut, arecanut, cashewnut, ginger, turmeric, black pepper and the second largest producer of fruits and vegetables. The major impediments facing Indian agriculture sector are the near stagnant growth in sowing area and yield per hectare during the last decade, increasing demographic pressures on land, low investment in rural infrastructure, low processing of agricultural products and inadequate credit flow to the sector.

Institutional Framework

The role of some of the key organisations attending to various functions in the agriculture sector is shown below:

Table 4 - Organisational Framework

Function	Organisation
Policy & overall co-ordination	Ministry of Agriculture, GoI
Policy formulation, planning & coordination of agriculture development	Department of Agriculture & Co-operation (DAC), State Departments of Agriculture (SDAs),etc.

...contd.

Function	Organisation
Management of supply of inputs and services to the agriculture sector	DAC, SDAs, Department of Fertilizers etc.
Management of output prices of agriculture commodities.	Commission for Agricultural Costs and Prices (CACP), DAC Implementation agencies: FCI, CCI, JCI, NAFED, Tobacco Board, SDAs, etc.
Marketing and distribution of agriculture products	State Agricultural Produce Marketing Boards, NAFED, National Cooperative Marketing Federation Ltd., Tribal Cooperative Marketing Development Federation Ltd., State Trading Corporation Ltd., State level bodies, etc.
Financing	National Bank for Agriculture and Rural Development, Commercial Banks, Regional Rural Banks, Cooperatives, etc.
Research & Development	Indian Council of Agricultural Research, Department of Agricultural Research and Education, State Agriculture Universities, SDAs
Personnel training	Extension division of DAC, ICAR, SDAs, State level bodies , etc
Export of Agriculture Products	Agricultural & Processed Foods Export Development Authority, Indian Silk Export Promotion Council, State level bodies, etc.

Source: CARE

As is evident from above, a large number of Government institutions are active in the entire value chain of the Indian agriculture sector with large interdependencies.

Regulatory Framework

The farmers, who produce several crops including foodgrains, must get quality seeds to ensure high level of production. In recent years, several improved, high yielding and hybrid seeds have been developed. As the impact of the kind of seed used will be known only after harvesting i.e. after the farmer has invested

substantial time and money, it is important that quality seeds are made available to the farmers. To avoid malpractices and ensure availability of quality seeds to farmers, it was essential to regulate the quality of seeds sold to farmers. The **Seeds Act, 1966 (Seeds Act)** which came into force throughout the country on October 2, 1969, provided for the formation of various regulatory bodies to carry out the provisions of the Act.

The important regulatory bodies and their respective functions are shown in the table below:

Table 5 - Important Regulatory Bodies

Regulatory Bodies	Role
Central Seed Committee (CSC)	To give suggestions to the Central Government (CG) regarding seed production, certification, notification of new varieties and matters related to the administration of the Act.
Central Seed Certification Board (CSCB)	To formulate the guidelines and procedures with regard to seed certification in the country and to maintain the uniformity for seed certification standards.
Seed Certification Agency	To carry out Certification work of various seeds notified under Seeds Act 1966, National Seeds Corporation Ltd. started functioning as Seed Certification Agency initially. Subsequently, 22 states have established their own State Seed Certification Agencies (SSCAs).
Central Seed Testing Laboratory (CSTL)	To initiate seed testing programmes designed to promote uniformity in test results between all seed laboratories in India, collect data continuously on the quality of seeds found in the market and make the data available to the CSC and to coordinate investigations to the methods of germination, etc. to standardize the testing procedure.
State Seed Testing Laboratories	Since there is no independent Central Seed Testing Laboratory as on date, a laboratory of the Indian Agricultural Research Institute has been designated as such since 1969.

Source: CARE

The Act, *inter alia*, provides for:

- notification of kinds/varieties to be brought under the purview of the Seeds Act;

- the procedure of sale of seed; and
- establishment of seed law enforcement machinery.

Further, central government is empowered to make rules under the Act and give directions to state governments, if necessary, to carry out the purpose of the Act. However, the responsibility of enforcement of various provisions of the Act is vested with the state governments.

In exercise of the powers conferred by Section 3 of Essential Commodities Act, 1955, the **Seed Control Order, 1983** came into force throughout the country on December 30, 1983. The Order made licensing compulsory for any person (Dealer) engaged in selling, exporting or importing of seeds in India.The **Protection of Plant Varieties and Farmer's Rights Act, 2001** deals with Plant Variety Protection (PVP) which became mandatory for India due to the agreement on Trade Related Intellectual Property Rights (TRIPS).

The National Seeds Policy, 2002 has been tabled in the Parliament. The main objective of the policy is the creation of an appropriate climate for the seed industry to utilize available and prospective opportunities, safeguarding the interests of Indian farmers and the conservation of agro-biodiversity.

Seed Industry

Seeds form the fundamental and crucial input for sustained growth in farm production, often stimulating the use of new methods, machinery and yield-enhancing agro-inputs. Seeds of appropriate characteristics are required to meet the demand of diverse agro-climatic conditions and intensive cropping systems. Sustained increase in agriculture production and productivity is dependent to a large extent on the development of new and improved varieties of crops and an efficient system for timely supply of quality seeds to farmers.

The main characteristics of the seed industry are:

- seeds are living organisms and must remain alive in order to produce good plants. Environmental factors like moisture and temperature have profound effect on the physiological quality of the seed;
- production and marketing are seasonal;

- seed production is always beset with risks, as production and consumption are influenced by nature;
- demand estimation is difficult;
- production process follows a definite pattern and needs continuous surveillance;
- statutory controls and quality standards are important;
- proper storage facilities complying with the humidity and temperature requirements for a particular variety of seed are essential;
- high volume low value nature of some seed crops like cereals makes long distance transport unattractive; and
- basic input for agriculture and hence having sensitivities.

As in most developing countries, the Government has played a dominant role in the development of the seed industry. Seeds are often regarded as a strategic input to agriculture and, therefore, the Government has evolved an institutional mechanism to ensure supply of adequate quantity of quality seeds at reasonable prices to farmers.

The policy and regulatory framework that has evolved over a period of time has influenced not only the seed sector positively, but has also been instrumental in the growth achieved in agriculture production. The Indian seed sector has made impressive progress over the last three decades, contributing to the area under High Yielding Variety (HYV) having almost doubled during the period 1980-81 to 1998-99. The table below shows the area under HYV for major foodgrains for the period 1980-81 to 1998-99:

Table 6 - Area under HYV

(Mn Hectares)

	Year					CARG (%)	
Foodgrains	**1998-99#**	**1997-98#**	**1996-97***	**1990-91**	**1980-81**	**1991-99**	**1981-91**
Wheat	24.0	23.0	23.7	21.0	16.1	1.9	3.0
Rice	33.0	32.2	33.4	27.4	18.2	2.7	4.6
Jowar	9.3	9.0	8.3	7.1	3.5	3.9	8.2

...contd.

	Year					CARG (%)	
Foodgrains	1998-99#	1997-98#	1996-97*	1990-91	1980-81	1991-99	1981-91
Bajra	7.2	7.0	6.1	5.7	3.6	3.4	5.2
Maize	3.6	3.6	3.8	2.6	1.6	4.8	5.5
Total/Avg.	**77.1**	**74.8**	**75.3**	**63.8**	**43.0**	**2.7**	**4.5**

* *Provisional # Target*

Source: Statistical Outline of India, 2002-2003, Tata Services Limited / CARE

Stages in Seed multiplication

Seed industry in India is involved in the production of seeds of good quality as also in achieving diversity in varietal distribution. The Indian seed programme adheres to the three generation system of seed multiplication, namely, breeder, foundation and certified seeds. The basic seed is evolved by research organisations, ICAR, State Agriculture Universities (SAUs), and SDAs. The process of seed development takes three to four years. Breeder seeds are produced from Nucleus seed in the first year. In the second year, Foundation seed is produced from Breeder seed and then Certified/Quality seed is produced from Foundation seed in the third year. The seed produced may be used by farmers in the third year itself or in the fourth year.

All varieties notified under section 5 of the Seeds Act 1966, have to be certified by SSCAs as per the certification standards set by the CSCB or truthfully labeled as per the norms of the Seeds Act 1966. Seed certification is voluntary. However, it is mandatory on the part of all seed producers to represent all information as prescribed under the Seeds Act 1966.

The table below shows the various stages of Certified Seed production and the agencies involved at each stage:

Table 7 - Stages of Seed Multiplication

Stage	Description (Genetic Purity %)	Agencies Involved	Regulatory Bodies
Nucleus Seed	Nucleus seed is the seed produced by the Breeder to develop a particular variety	Research Organisations, ICAR, State Agriculture Universities, and State	CG in consultation with CSC notifies the variety to be certified.

...contd.

Stage	Description (Genetic Purity %)	Agencies Involved	Regulatory Bodies
	and is directly used for multiplication as breeder seed. (100%)	Departments of Agriculture, Private Companies.	
Breeder Seed	Breeder seed is the seed material directly controlled by the originating or the sponsoring Breeder or Institution for the initial and recurring production of foundation seed. (100%)	Research Organisations. ICAR, State Agriculture Universities, State Departments of Agriculture, NSCL, SFCIL, State Seed Corporations, Private Companies.	Certification standards are set by CSCB. Central Seed Testing Laboratory (ICAR). SSCAs, State Seed Testing Laboratories (SSTLs).
Foundati-on Seed	Foundation seed is the progeny of breeder seed. (100%)	NSCL, SFCIL, State Seed Corporations, Private Companies. (Individual farmers can also produce Foundation seed on registered farms.)	Central Seed Testing Laboratory (ICAR). SSCAs, SSTLs.
Certified Seed	Certified seed is the progeny of foundation seed. (97%)	NSCL, SFCIL, State Seed Corporations, Private Companies. (Individual farmers can also produce Certified seed on registered farms.)	Central Seed Testing Laboratory (ICAR). SSCAs, SSTLs.

Source: CARE

In the matter of distribution of good quality seeds, Indian seed industry has recorded impressive growth, as shown in the table below:

Table 8 - Distribution of Certified/Quality seeds

(Mn quintals)

	Year				CARG%	
Crops	**2001-2002***	**2000-2001#**	**1990-91**	**1983-84**	**1983-91**	**1991-01**
Cereals	6.231	5.979	3.470	2.570	4.38	6.23
Pulses	0.648	0.384	0.341	0.210	7.17	1.33

...contd

	Year				CARG%	
Crops	**2001-2002***	**2000-2001#**	**1990-91**	**1983-84**	**1983-91**	**1991-01**
Oilseeds	1.950	1.185	0.859	0.650	4.06	3.64
Fibres	0.480	0.291	0.216	0.190	1.85	3.37
Vegetables	1.667	0.705	0.824	0.880	-0.93	-1.72
Total 8/Avg.	**10.976**	**8.544**	**5.710**	**4.500**	**3.46**	**4.58**

*# Anticipated * Target*

Source: DAC, MoA / CARE

Though the distribution of certified/quality seed has almost doubled for the period under consideration, the growth rates for the period 1991-01, except for cereals and fibres have declined compared to the period of 1983-91. This is perhaps a reflection of the fact that there has not been any significant improvement in seeds technology in the vital segments of the farm economy such as pulses, oilseeds, fruits and vegetables.

Current Scenario

The commercial world seed market is assessed at around US $30 Billion. The U.S. seed industry, with total sales of nearly $6 Billion per year, is the largest seed industry in the world. Organised seed industry in India with a turnover of around US $620 Mn, ranks among the top ten countries in the world. The domestic consumption is around US $600 Mn and seeds worth about US $20 Mn are exported (Source: International Seed Federation). However, some estimates put the domestic market size at around $900 Mn.

Indian seed sector involves the participation of private as well as public sectors. The seed industry in India broadly comprises two national level corporations (NSCL & SFCIL), 13 SSCs, ICAR, SAUs, Co-operative sector, around 200 private seed companies and the unorganised sector involving thousands of seed producers, seed traders, dealers and merchant agents. For quality control and certification, there are 22 SSCAs and 101 SSTLs. The leading companies in the private sector are Maharashtra Hybrid Seeds Company Limited (MAHYCO), Monsanto India, Nath Seeds, Proagro Seed Co. Ltd., Ankur Seeds Ltd., Raasi Seeds, Advanta India Ltd., PHI Seeds Ltd., etc.

In India, 80% of the seed used for cultivation is farm-saved seed. Seed replacement rate for the major crops like rice and wheat is below 10 per cent

as against the desired rate of about 20%. The organised seed sector supplies around 10 Mn quintals of certified/quality seeds of major field crop groups namely, cereals, pulses, oilseeds, fibres and fodders. Although there is no reliable data available on quantity of seeds supplied by the unorganised sector, there is no doubt that the unorganised sector plays a major role in the seed sector. Hence, it is difficult to estimate the exact market size, both in terms of quantity and value.

The private sector accounts for around 70% of the market in terms of the organised turnover whereas the public sector has a greater share in terms of volume sales. SFCIL and NSCL together have a market share of around 6% in cereals, around 11% in pulses and around 5% in total certified/quality seed in volume terms for the year FY 2001-02. Public sector agencies concentrate more on HYV and hybrid varieties of food crops and cereals, which are of 'high volume low margin' nature. Organised private sector participation in this segment of the seed sector is almost negligible on account of the typically low margin on these products. Public sector agencies have direct access to breeder seeds developed by ICAR and SAUs. Due to the long gestation period involved in developing new seed varieties and in absence of system for varietals registration, till recently, private organizations generally did not invest in research. Further, the rampant piracy of varieties and breeding lines that is reportedly prevalent in the country also acts as a major hindrance. Now, a number of private seed companies have their own seed research programmes.

However, the investment of private seed companies is limited to work on hybrids (for certain crops), since hybrids provide an in-built mechanism for protecting them from piracy. Companies with foreign/technical collaboration and subsidiaries of MNCs operating in India outsource germplasm from their collaborators/MNCs. Companies also get into Licensing arrangements with MNCs for outsourcing germplasm. Private companies tend to concentrate on developing hybrid varieties for oilseeds, maize, cotton and vegetable crops, which are typically 'low volume high margin' products. Factors responsible for the immense interest shown by private companies in development and sale of such specific hybrid seeds include the higher margins on these products as also, that such hybrid seeds can be used only once, which assures a market for the next sowing season. Private companies have a dominant share of the vegetable seed market. Of late, there has been a gradual shift towards branded hybrid

varieties of fruit and vegetable seeds, which give better prices and higher yield in relatively shorter span of their cropping activities.

Trade

Imports are mostly confined to vegetable, flower and fruit seeds for which no import restrictions exist. Total imports during FY 2000-01 were valued at $13.9 Mn, compared with $13.6 Mn in FY 1999-00.

India also exports seeds (mostly vegetable seed), which are mainly custom grown by foreign seed companies for export to third country markets. Varied agro-climatic conditions and cheap labour make India a favoured source for custom growing of seeds. Exports during FY 2000-01 were valued at $20 Mn, compared with $18.4 Mn in FY 1999-2000.

Biotechnology

Biotechnology can be used to develop new seeds/ crops, which are tolerant to disease, pests, abiotic stresses and also improve productivity and nutritional quality of food. Till date, with the exception of Monsanto's Bt cotton, no Genetically Modified (GMO) varieties of crops have been officially released by Genetic Engineering Approval Committee, the regulatory body which determines use of GMOs at the commercial level. In FY 02, the area under transgenic crop has risen by 6% globally to 58.7 Mn hectares. The country's stake in agriculture biotechnology is expected to increase. Work is underway with transgenics of rice, brassica, moongbean, pigeonpea, cotton, potato, tomato, and some vegetables like cabbage, cauliflower etc. According to a Vision Paper prepared by the Department of Biotechnology, transgenics of these crops would complete field assessment and some of them would be ready for large scale production by 2005

Outlook

As mentioned earlier, Indian seed industry has made enormous progress over the last three decades with the Government playing a dominant role. In the last decade or so, participation of private sector in the seed sector has increased. Private players are expected to further increase their presence with launch of new hybrid varieties of seeds. The industry is expected to undergo a

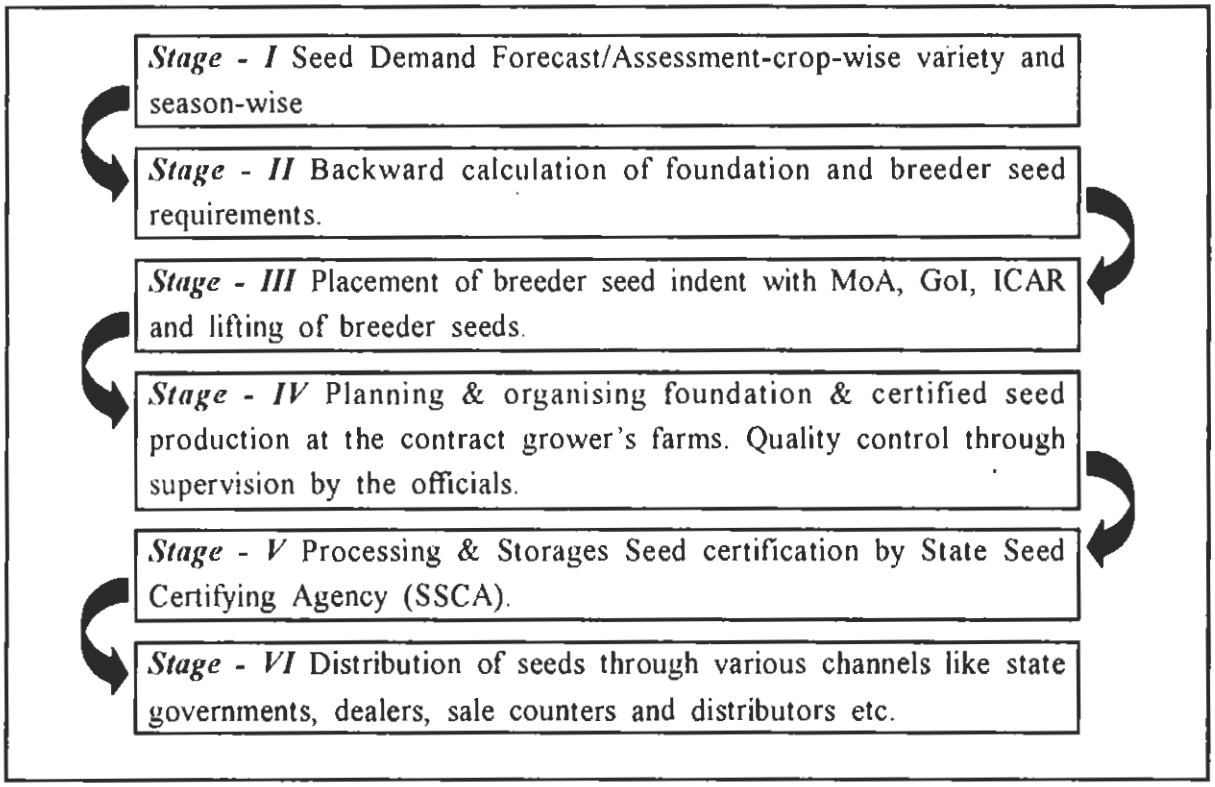
consolidation phase with small players either exiting the market or being acquired by larger players. The Protection of Plant Varieties and Farmers Rights Act, 2001 and National Seeds Policy 2002 are major positive developments for the Indian seed sector. India has certain inherent advantages that can make her a dominant player in the world seeds market. In addition to the advantages of relatively cheap agricultural labour, second largest area of farmland and the largest area of irrigated land, a wide variety of agro-climatic conditions is also available in the country. India, with all these favourable factors, is well placed to serve both domestic and international markets.

NSCL's OPERATIONS

NSCL's operations primarily consist of production of different categories of seeds, viz. foundation and certified seeds. NSCL acts as a link between the upstream research institution like ICAR and the utilimate user in supplying certified seeds. NSCL gets seed production done at private farmer's land after a contract is finalised regarding the area, the output of the produce etc.

The broad process flow of the operations of NSCL is shown below:

Process flow



Being a public sector company, NSCL has access to breeder seeds from ICAR and SAUs. Since it gets the seed production done on contract growers' fields, it does not take the farming risk on itself. In this system, it supplies the initial/ source planting material (i.e. breeder seeds) to the seed growers for raising the crop on a reserved area. The breeder seeds when multiplied result in foundation seeds and certified seeds. The reserved area is cultivated by the seed growers under NSCL's technical supervision and guidance.

Earlier, NSCL used three of its farms at Nandikotkur (AP), Kithaganahally (Bangalore) and Sanij (HP) for seed production. But it closed all the three farms due to uneconomical nature of production and lack of irrigational facilities at the some of the farms.

Product profile

NSCL's product is "seed and planting material of field and vegetable crops". The product range of NSCL is large and includes cereals, millets, pulses, oilseeds, fibres, fodders, green manures and vegetables. It deals with 75 crops with around 400 varieties. Hybrid seed production under maize, sorghum, bajra, cotton, paddy, fodder is also undertaken by NSCL. The total hybrid seed production in FY'1999-2000 was 474.44 quintal.

Sale of seed

The sale of seed by NSCL is interlinked with the purchase of seeds from various sources. Production planning and implementation are largely demand driven. The foundation seed and certified seeds are procured from contract growers out of production organised by NSCL through them. Category-wise and total procurements over the five year period (1998-2002) are shown in the following table:

Table 9 - Purchase of seed

(quintals)

Seed category	2002	2001	2000	1999	1998	CARG (%)
Breeder	1848	1995	2166	2451	2097	-3.11
Foundation	18110	17652	16046	22792	22368	-5.14

...contd.

Seed category	2002	2001	2000	1999	1998	CARG (%)
Certified	308072	369885	349892	380153	369084	-4.42
Total	**328030**	**389532**	**368104**	**405396**	**393549**	**-4.45**

Source: CARE

As mentioned above, breeder seed is the basic seed from which foundation seeds are produced by the contract growers. Over the years, the procurement of breeder seeds has fluctuated due to demand estimation of various crops. The CARG has been negative for all seed categories (table 9). The category-wise production of quality seeds for the country and NSCL's share in total seed production in the country are shown in the tables below:

Table 10 - Production of Quality seeds

(quintals)

Seed category	2002*	2001	2000	1999	1998	CARG(%)
Breeder	47020	42690	51131	38994	46134	0.48
Foundation	544000	591000	466000	675000	684000	-5.56
Certified	9100000	8627000	8798000	8497000	7879000	3.67
Total	**9691020**	**9260690**	**9315131**	**9210994**	**8609134**	**3.00**

**According to Annual report 2002-03, Ministry of Agriculture*

Source: Economic Survey 2002-03 / CARE

Table 11 - NSCL's share in production of seeds

(percentage)

Seed category	2002	2001	2000	1999	1998
Breeder	3.93	4.67	4.24	6.29	4.55
Foundation	3.33	2.99	3.44	3.38	3.27
88Certified	3.39	4.29	3.98	4.47	4.68
Total	**3.38**	**4.21**	**3.95**	**4.40**	**4.57**

(The figures represent purchase of seeds by NSCL from contract growers)

Source: CARE

As evident from above, NSCL's share in total seed production in the country has declined from 4.57% for the FY 98 to 3.38% for the FY 02. Further, as is evident from tables 9 & 10, NSCL has recorded a negative growth rate in

seed production compared to a growth rate of around 3% exhibited by the industry.

The total sale of seeds by NSCL during the period FY 1997-98 to FY 2001-02 is shown in the table below:

Table 12.- Sale of seeds

(quintals)

Seed category	2002	2001	2000	1999	1998
Breeder seed	1966	2324	2431	1915	1899
Foundation seed	15249	17039	17281	21357	22558
Certified seed	332253	345029	350469	394792	324481
Total	**349468**	**364392**	**370181**	**418064**	**348938**

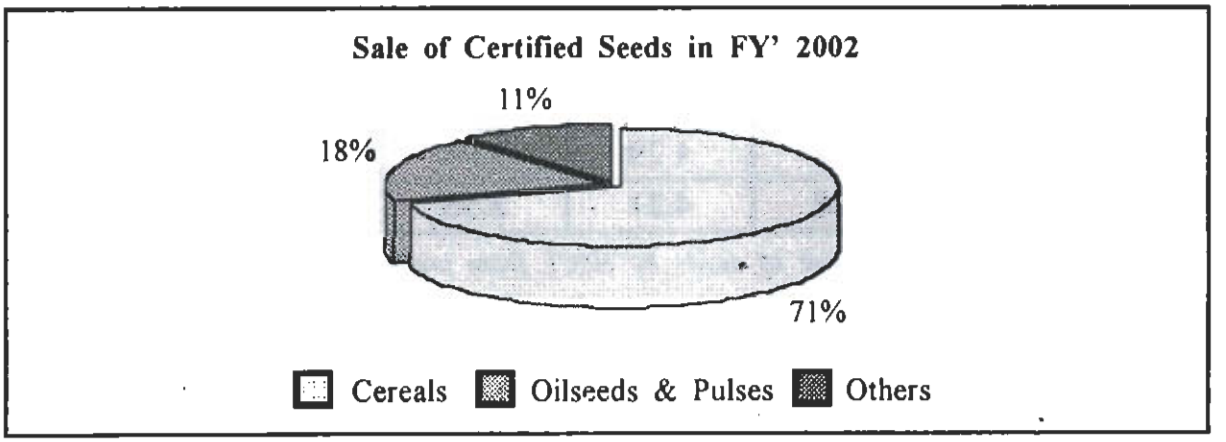
Source: CARE

Total quantity of seed sold in FY 2001-2002 was marginally lower as compared to the previous year due to lower purchase of seed from the farmers.

Product-mix

The product-mix of NSCL is geared toward "high volume and low value" cereals like wheat and paddy. The share of different products in the total sale of around 332 thousand quintals of certified seed in FY 2002 is illustrated in the chart below :

Product-mix



Source: CARE

As evident from above, the share of cereals i.e. wheat and paddy, was high at 71 percent while the share of "low volume high value" products like oilseeds and pulses was only 18 percent. Other certified seeds sold included maize, sorghum, bajra, vegetable and starch crops like potato.

According to the Memorandum of Understanding (FY 2002-03) with GoI, the product-mix is to be changed gradually with optimum level of high margin and low margin products.

The procurement of breeder seeds of different type of crops over the years is shown in the table below:

Table 13 - Procurement of breeder seeds

(In quintals)

	2002	2001	2000	1999	1998
Cereals					
Paddy	36	15	50	48	150
Wheat	460	559	438	344	419
Non cereals					
Pulses	352	431	381	228	287
Oilseeds	352	323	548	512	338
Others	648	667	749	1319	903
Total Breeder seeds	**1848**	**1995**	**2166**	**2451**	**2097**

Source: CARE

There is a declining trend in procurement during the last few years. The level of procurement of breeder seeds affects the quantity of foundation and certified seeds procured as they are given to the growers for multiplication in their field. The share of oilseeds and pulses in the total procurement of breeder seeds was 38 percent in FY 2002. NSCL receives production and distribution subsidy from GoI under the Technology Mission on Oilseeds and Pulses (TMOP) which are passed on to the farmers. The assistance under various centrally sponsored schemes is shown in the following table :

Table 14 - Assistance under Centrally sponsored schemes

(Rs.Mn)

Assistance under Centrally sponsored schemes	FY 2002	FY 2001	FY 2000	FY 99	FY 98
Reimburesement of PD* on sale of certified seed	1.24	1.16	0.89	1.22	1.42
Reimbursement of PD - seed bank scheme	1.97	4.87	0.00	0.00	0.00
Reimbursement of expenses - seed bank scheme	8.84	10.61	2.18	0.00	0.00
Other Assistances for popularisation & production of quality seeds	1.42	1.79	23.60	16.47	17.79
Transport subsidy	5.91	3.99	3.44	3.15	0.99
National seeds project	0.00	5.57	5.03	4.36	3.48
Production subsidy	38.45	38.06	21.60	0.00	0.00
Total	**57.82**	**66.06**	**56.75**	**25.20**	**23.67**

**Price Differential*

Source: CARE

Export of seeds

Historically, NSCL's share in the export of seeds has remained minuscule compared to the overall sale. The company imports vegetable seeds, mostly from Japan. The details of seed exported by NSCL for FY 1999-2000 to FY 2001-2002 are shown in the table below :

Table 15 - Export of seeds

Year	Country	Crop & variety	% of export to sales
2001-2002	Indonesia	Wheat seeds	Low
2000-2001	Senegal, Mauritius	Assorted vegetable seeds, groundnut	0.01
1999-2000	Bukirna Faso, Senegal,Tanzania	Maize, paddy, assorted vegetables	0.08

Source: CARE

NSCL also exports seed on the basis of bilateral agreements entered into by GoI with various countries. During FY 2002-2003, it exported 468 quintals of assorted vegetable seeds to Afghanistan. There is potential to export seeds but the main problems are:

- Lack of market intelligence,
- Quality specifications,
- Quarantine conditions, and
- Lack of infrastructure.

Marketing Network

NSCL has a well developed nation-wide marketing and distribution network to supply certified seeds to the farmers. There are 11 regional offices and 84 area offices to have an all India presence. The three main marketing channels of NSCL are:

- Dealers,
- State Governments(SGs), and
- Sale counters.

Due to a conscious policy of NSCL, the share of SGs in total share has declined over the years and at present it is around 40%. The payment by SGs generally has a lag of few months. Shares of other channels are: 55% by dealers and 4% by NSCL's own sale counters. Recently, NSCL has enrolled 6-8 distributors in areas with potential throughout the country. The dealers operate on cash and carry basis. NSCL also participates in the minikit schemes on oilseeds, pulses, wheat and fodders.

FINANCIAL ANALYSIS

Operating profits

A summary of the operating performance of NSCL for FY 2000-2001 and FY 2001-2002 is shown in the following table :

Table 16 - Operating performance

(Rs.Mn)

Year to March 31	2002	2001
Sales incl. Sale of service	661	644
Change in stock	-37	17
Other incomes	28	38
Total income	**651**	**698**
Cost of Production	**647**	**722**
Gross Profit	4	-24
Profit After Tax	**-24**	**-48**
Net cash profit	**-17**	**-41**
Retained profit	-24	-48

Source: CARE

Though the sales income has increased, the company is making losses. The main reason for the losses in FY 2001-2002 was the mismatch in the estimated and actual turnover by almost 81,000 quintals. The shortfall in sales was due to poor market condition in Jowar and Bajra. This shortfall in target sale is estimated to have resulted in a loss of about Rs.74 Mn.

Profit and Loss Account as well as Balance Sheet for last five years, as shown in tables below, would indicate the poor financial health of NSCL:

Table 17 – Profit & Loss Analysis

(Rs.Mn)

Year to March 31	2002	2001	2000	1999	1998
Income					
Sales	659	642	684	732	563
Sale of services	2	2	3	3	3
Change in stock	-37	17	-19	-31	65
Other incomes	28	38	27	41	40
Total income	**651**	**698**	**695**	**746**	**672**
Expenses					
Purchases	357	401	387	450	423
Operational Expenses	56	66	64	63	54

...contd.

Year to March 31	2002	2001	2000	1999	1998
Employee expenses	195	216	169	152	121
Selling expenses	9	6	6	7	5
Administrative Expenses	30	33	33	35	31
Total Expenses	**647**	**722**	**658**	**707**	**634**
PBILDT	**4**	**-24**	**37**	**39**	**38**
Depreciation	8	7	7	7	7
PBIT	**-4**	**-31**	**30**	**32**	**30**
Interest	22	23	22	25	28
Provision for doubtful debts	4	3	5	5	2
PBT	**-30**	**-57**	**3**	**2**	**0**
Provision & laibilities no longer required	8	3	4	3	4
Prior period adjustments	-2	6	1	-2	0
Provision for tax		0	0	0	0
PAT	**-24**	**-48**	**8**	**3**	**4**
Loss brought forward from previous year	-167	-117	-125	-128	-149
Cash loss reimbursed by GOI	0	0	0	0	16
Transfer from capital reserve	0	-1	0	0	0
Loss taken to Balance Sheet	-191	-167	-117	-125	-128
Gross cash profit	**-17**	**-41**	**15**	**10**	**12**
Dividend (incl. Tax)	0	0	0	0	0
Net cash profit	**-17**	**-41**	**15**	**10**	**12**
Retained profit	-24	-48	8	3	4

Source: CARE

Table 18– Balance Sheet

(Rs.Mn)

Year to March 31	2002	2001	2000	1999	1998
Fixed Assets					
Gross fixed assets	203	206	200	196	194
Less: Depreciation	130	129	123	116	110

...contd.

Year to March 31	2002	2001	2000	1999	1998
Net fixed assets	73	77	77	80	84
Capital work in progress/ Material at site	1	0	0	1	0
Total Fixed Assets	**73**	**77**	**77**	**81**	**85**
Current Assets					
Inventories	124	162	145	164	195
Sundry debtors	212	197	204	167	129
Cash & bank balance	20	23	62	39	83
Other Current Asset	12	13	14	16	22
Loans and advances	126	122	83	81	77
Total Current Assets	**494**	**516**	**508**	**467**	**506**
Current Liabilities					
Sundry creditors	92	113	89	102	101
Government Grants received in advance	7	13	36	37	27
Other advance	2	2	21	15	9
Provisions & Other Liabilities	103	87	56	66	53
Total current liabilities & Provision	**204**	**215**	**202**	**219**	**190**
Net working capital	**290**	**302**	**306**	**248**	**316**
Total investments	85	85	85	85	85
Total Assets	**449**	**464**	**469**	**414**	**486**
Term liabilities					
Secured Loans - demand laons	177	193	179	147	191
Cash credit & interest due on	41	24	16	19	25
Total Term liabilities	**218**	**217**	**195**	**166**	**216**
Share holders fund					
Equity Share Capital	206	206	206	206	206
Reserve & Surplus					
Capital grant Reserve	143	146	143	143	145
Capital Grant	73	61	46	31	55
P& L Account (loss)	-191	-167	-117	-125	-128

...contd.

Year to March 31	2002	2001	2000	1999	1998
Total Share holders fund	**231**	**247**	**278**	**255**	**278**
Misc. exp. not written of	0	0	5	6	8
Net worth	**231**	**247**	**273**	**248**	**270**
Total Liabilities	**449**	**464**	**469**	**414**	**486**

Source: CARE

Ratio analysis

Some key financial ratios for the past four years are shown in the table below :

Table 19 - Past Financial ratio

Year to March 31	2002	2001	2000	1999
Growth in Employee costs(%)	-10	28	11	25
Overall gearing ratio (times)	0.94	0.88	0.71	0.67
Average Collection days	113	114	99	74
Average Creditor days	105	92	90	82
Average Inventory Level(days)	81	77	86	93
Book value per share	1120	1197	1326	1203

Source: CARE

The company has been making losses for the past two years and, as a result the profitability ratios and equity related data are negative. The company has managed to save expenses on employee cost (from Rs.216 Mn in FY 2001 to Rs.195 Mn in FY 2002) mainly due to the Voluntary Retirement Scheme(VRS) which was financed by a grant from GoI.

The average collection period is around four months of the value of sales. This is high because of lag in payment by State Government bodies where most of the sales is on credit basis. Even receipt of the money for the centrally sponsored schemes like minikit scheme has some time lag as the payment is made from budget provision.

Contingent Liabilities

The total contingent liabilities as on March 31, 2002 stood at Rs.48 Mn (21% of the networth). The main part of this comprises Rs.36 Mn classified as claims

not recognised as debt. This is mainly on account of legal cases filed against the company.

Inter-Firm Comparison

Domestic seed industry comprises NSCL, SFCIL, 13 SSCs, around 200 organised seed companies and the unorganised sector. The table below compares the performance of the various entities in the Indian seed industry on various parameters:

Table 20 – Comparison - Indian seed industry

Parameters	NSCL and SFCIL	SSCs*	Private companies
Objective/ Focus	SFCIL: To demonstrate the efficacy of large scale mechanised farming and produce seeds. NSCL: Production of breeder, foundation, certified and labeled seeds of a wide range and vegetable crops.	Production and supply of certified seed and within the state marketing of certified seed.	Focus is on commercial viability of operations.
Production	SFCIL: Production at owned or leased farms from State Govts. Conversion rate in SFCIL is lower compared to the industry norm. NSCL: Contract farming, marginal production at one leased farm (Operations of farm to be closed down in this FY).	Mostly contract farming. Players prefer to avoid the risk involved in farming.	Mostly contract farming. Players prefer to avoid the risk involved in farming.
Product profile	SFCIL: Concentration in 'High volume low value'products like wheat, paddy & pulses. Marginal presence in oilseeds & vegetables. Marginal production of hybrid variety seeds. NSCL: Diversified product profile. Share of 'high volume low value' is high around 70 percent. Marginal production of hybrid variety seeds.	Diversified product profile. Presence in Hybrid variety seeds. Product profile catering to local demand in respective states.	Product profile tilted in favour of 'low volume high value' crops. Dominant presence and focus on hybrid varieties of oilseeds, maize, cotton & vegetable crops. Majority of the companies operate with a regional focus.

...contd.

Parameters	NSCL and SFCIL	SSCs*	Private companies
Presence/ Marketing & Distrbn. network	Pan India presence. SFCIL: Heavy dependence on SDAs, SSCs (around 60%) and centrally sponsored programme (around 20%) for distribution of seeds. NSCL: Well developed nationwide marketing and distribution network.11 regional offices and 84 area offices. Sale through State Governments around 40%.	Respective state. Distributors & dealers.	Majority of the companies operate with a regional focus. However, bigger companies like MAHYCO have a considerable presence across majority of the states. Distributors & dealers.
Target market	All farmers, including marginal farmers	All farmers, including marginal farmers.	Farmers producing 'cash crop' like cotton, vegetables, fruits, oilseeds, etc,
R & D	Access to breeder, foundation seeds from ICAR, SAUs. No Research and Development efforts on their own.	Access to breeder, foundation seeds from ICAR, SAUs. No R&D effort on their own.	R & D effort concentrated to develop new hybrid varieties. In other cases, licensing arrangements worked out with MNCs to get access to parent seed.
Employee cost as a % of sales.	SFCIL : 60 NSCL : 30	11.18	6.48^
PAT margin (%)	Both SFCIL and NSCL are making losses. However, in case of NSCL, the company has incurred losses for the last two years after satisfactory performance for the previous years.	1.55	8.40^
Sales Turnover (Rs.Mn)	SFCIL : 423 NSCL : 659	615	552#

**Analysis is done on the basis of latest available data on 5 SSCs i.e Andhra Pradesh State Seed Devp. Corp. Ltd., Gujarat State Seed. Corp. Ltd., Maharashtra State Seed. Corp. Ltd., Karnataka State Seed Corp. Ltd., and Haryana Seed Devp. Corp. Ltd.*

^ Analysis is done on the basis of latest available data of 9 private companies of the Indian seed industry.

 # Based on turnover from seeds business only, in case of diversified Agrochemical firms

Source: CARE.

As is evident from the table above, in case of NSCL, the employee cost is substantially higher than that for the other players. Further, the product profile of NSCL is geared towards 'high volume low value' products. In essence, a combination of both the factors has affected financial performance of the company.

SWOT ANALYSIS

Strengths	*Weaknesses*
• A well recognised brand name in the seed industry due to four decades of supplying quality seeds.	• The contract farmers can under-report the produce or can sell the produce in the open market at times.
• Fully owned by GoI and hence has the backing in terms of policy and gets technological support from ICAR and other research institutes.	• Lack of irrigation facilities at the contract growers' farm and dependence on rainfall may result in variation in quantity and quality of produce.
• Has a well-established distribution network through which it undertakes inter-state marketing of all classes of seeds.	• The product-mix of NSCL is skewed in favour of cereals where the margin is less. Therefore, the profitability of the company is low and company may not be able to generate enough funds for investment in upgradation of the infrastructure.
• It has a well qualified and technically competent manpower which also gives training to the farmers.	• The company does not have the flexibility to compete with the private players on pure commercial terms.
• It is a medium through which the various varieties discovered by ICAR are made available to the farmers at the ground level.	• One of the major weaknesses of the company is the aging staff at the top level. Also, considering
• It has a product range of around 450 varieties in seventy crops and	

...contd.

Strengths	*Weaknesses*
hence meets the needs of such State Governments where there are no seed corporations as well as the residual demand of other states. • One of the strengths of NSCL is that it gets the seed production out-sourced by contract farming and as a result does not itself assume the farming risk. • NSCL, together with other public sector companies (mostly at state level), claims to have some effect on stabilising the price of quality seeds. • It maintains a seed bank which can be used in case of emergencies. Infact, during Orissa cyclone, almost 11000 MT seeds were dispatched through NSCL.	that it gets seed produced through contract farming, the number of employees is on the higher side. • The share of export in total sale of the company is negligible.
Opportunities	***Threats***
• Seed is a basic input and there is still a vast gap between requirement/demand and supply. • There is scope to increase the export of seeds.	• Seed Policy 2002 recommends access of breeder seeds to the private players which may increase competition. • The State Seed Corporations may take away further market share from NSCL.

Opportunities	*Threats*
	• Increased competition from foreign agriculture companies due to proposed reduction in the tariff and non-tariff barriers according to WTO Agreement on Agriculture. • The private players may affect the market share of NSCL in case they introduce hybrids much faster.

Source: CARE

DISINVESTMENT CONSIDERATIONS

NSCL was formed in 1963 with the aim of streamlining and giving direction to the seed industry in India. Prior to the establishment of NSCL, there was no formalised system of production and distribution of seeds in India and the major problem encountered by the country was one of food scarcity. In the absence of a formal seed production and distribution system, farmers were using a part of their harvest for seed production resulting in declining yields. It was envisioned that with the establishment of NSCL, the food grain production would receive a boost through the use of quality seeds.

NSCL started production and marketing with the introduction of hybrid maize and subsequently, it started production of foundation and certified seeds of other field and vegetable crops. The mandate of NSCL is to ensure timely availability of adequate quantity of quality seeds at reasonable price to farmers so as to accelerate the growth in food production. In addition to this, it was also expected to have an extensive quality control mechanism and maintain a buffer stock of seeds of principal crops. It also assisted in setting up seed processing plants and training of individuals involved in seed production.

The strengths and contribution of NSCL are reiterated below:

- The business model adopted by NSCL is one of contract farming and not of production at its own farms. In fact, it surrendered two of its farms to

SGs and production at the third farm is also being discontinued. With this model, NSCL is insulated from risks associated with farming and this model is in line with the one adopted by the seed industry at large.

- One of the major functions performed by NSCL (together with other entities in the public sector, like State Seed Corporations) is to influence price stabilisation. NSCL, despite its small presence in the seed market, has a well established network of 11 regional offices, 84 area offices and 6-8 dealers.

- It is an established brand in the seed market due to its relationship with the farmers. Apart from long years of association, the relationship has been nurtured through technical help on farming practices provided by the staff of NSCL.

- NSCL helped in establishment of SSCs based on its own model. SSCs perform the role of NSCL at the state level. NSCL is a shareholder in SSCs.

- It has a product range of around 450 varieties in seventy crops and is a vehicle through which various varieties discovered by ICAR and agricultural universities are made available to the farmers at the ground level.

- NSCL is an important link in the seed sector infrastructure set up by GoI for improving seed quality. It receives improved varieties of breeder seeds from ICAR/SAUs and gets the seed production done at contract growers' farms. Subsequently, it ensures distribution to farmers either directly or through the SSCs it has promoted.

Issues in Disinvestment

- Focus of NSCL's operations is on timely availability of quality seeds, especially of wheat and paddy, at reasonable price to farmers. As a result, it claims to have a role in the stabilisation of the price of these seeds

- Perennial problems faced by the farmers, especially marginal farmers, include exploitation by middlemen, both for providing farm inputs and sale

of output. Although with the functioning of a number of state sponsored entities in different areas, there has been considerable improvement in the situation, a lot remains to be done and the presence of state sponsored entities may be required for a longer time.

- At present there are 13 SSCs operating in different states and there is need for an agency at the national level to co-ordinate their effort and facilitate movement of seeds from one state to another. Many other states, especially in the North-East, do not have State Seed Corporations. In such states, NSCL plays the role of SSCs.

- As NSCL produces a large variety of different seeds, it also meets the unfulfilled demand of different states, including the ones with SSCs.

- In India, the private sector participation in the seed industry has increased substantially over the last decade. But their product profile is skewed in favour of cotton, vegetables, fruits and oilseeds. Presence of organised private sector in cereals like wheat and paddy is low.

- NSCL is the nodal agency for maintaining seed bank from which any shortage of seed can be met in case of any natural calamity.

- Central Government schemes for production and distribution of certified seeds are implemented, *inter alia*, through NSCL.

- In most of developing countries, there is an active presence of state sponsored entities in the distribution of quality seeds.

- As the physical assets of the company are not substantial and the role played by it may not be highly attractive to potential buyers, it may be difficult to find appropriate investors in NSCL at this stage.

- Although the company has suffered losses for the last two years, the business model followed by it is not out of tune with the industry practice. With the systems and procedures being followed, turning around NSCL may not be very difficult. To improve its functioning, the Board of NSCL may be strengthened by inducting independent Directors from specialised fields like marketing, finance etc.

- Further, it is felt that a turn around can be accelerated by a review of the staff strength, especially at lower levels. NSCL's regular employee strength of around 900 is excessive, considering the fact that it relies on contract farming for production of seeds. The company should, therefore, reduce the number of surplus employees by offering a VRS package, especially to the employees at lower levels, mainly C & D categories. At the same time, it needs to strengthen its middle/top management which is ageing due to lack of recruitment since 1984.

- At present, NSCL is one of the main links between upstream research institutions like ICAR/SAUs and the farmer. But legislations on the anvil envisage greater role for private sector in the seed industry. NSCL will, therefore, have to improve its competitive skills for retaining its relevance in the emerging scenario.

- Disinvestment Commission, in its earlier report (No.XIX) has recommended that entire shareholding of GoI in State Farms Corporation of India Ltd. (SFCIL) be disinvested in favour of a strategic investor.

In view of the need for providing adequate quantity of quality seeds at the right time, limited presence of organised private sector players in paddy and wheat segment, chances of marginal farmers being exploited by the unorganised private sector, the need for an agency at the national level to co-ordinate the activities of state level agencies active in the seed sector, limited investor interest in NSCL at this stage and the role played by NSCL so far, it is felt that NSCL should be retained as an entity with majority ownership of government for some more time. However, the following developments should be taken full cognisance of:

- The National Seeds Policy, 2002 encourages entry of private sector in the Seed sector

- Regulations on the anvil envisage greater role for private sector in the seed industry.

- One of the private sector companies has introduced a hybrid variety of wheat seed last year. Its performance will be closely watched by the organised private sector players and success may prompt others to enter

the fray. Farmers may not hesitate to purchase such hybrid seeds, if proved successful.

- Further, introduction of Plant Variety Registration system is expected to provide an incentive to the private sector to actively participate in Research & Development of new varieties of seeds.

- Abilities of Government (both state and central) to provide subsidies are waning.

NSCL needs to closely watch developments on the above and effect necessary changes to

- preserve and refine its business model,

- improve its product-mix,

- reduce labour cost, enhance staff productivity, and remain relevant in the emerging scenario.

In order to facilitate an improvement in NSCL's functioning to suit the emerging scenario, Government should induct a private sector partner in NSCL with sale of upto 49% of the equity, to start with. The balance (not less than 51%) should be retained by GoI for a few more years. The minority partner is expected to

- bring in commercial savviness and market orientation,

- upgrade technical skills,

- improve product-mix, and

- increase the staff productivity.

While selecting a partner, emphasis should be placed on technical competence, as the amount that may be realised by sale of equity of NSCL is not likely to be very high. The pattern of shareholding should be reviewed after some time, depending on the progress of envisaged regulatory/legislative framework and development of organised private sector interest in the cereal segment.

RECOMMENDATIONS

In view of the analyses above, the Commission recommends that NSCL should remain as a Government Company for a period not exceeding five years. To improve efficiency and for better corporate governance, Government should disinvest upto 49% of its share to a private sector partner, through the competitive bidding route. Further disinvestment of Government equity, totalling upto 74% or even upto 100%, leading to the privatisation of NSCL, should be considered after five years, by which time NSCL is expected to become more efficient and competitive, and be playing a larger role in Indian agriculture. It is also expected that during the next five years a number of organised private sector players will become active in the cereal segment (paddy and wheat, in particular) making the whole sector fully competitive.

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