



INFRASTRUCTURE

Indian Construction & Engineering Industries

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R R Investors

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Indian Infrastructure: Beginning of the Boom

Infrastructure sector in India is witnessing a mega uptrend that will continue for at-least five years. The reason is simple - unending growth prospects for the sector.

Stock prices of engineering majors like Siemens and ABB have multiplied five-fold in recent times and are trading at several times the markets' aggregate valuation. Siemens stock price jumped 50% in the last three months and trades at a price-to-earnings multiple (P/E) of 74 compared to BSE's total market of 22.

Yet fund managers and research houses are bullish on the stock. To be fair to the fund managers and analysts, there are some reasons for these businesses to be accorded a higher valuation than the rest of the market.

In the last two years, the market has opened up exponentially for the engineering and infrastructure companies. Siemens nearly doubled its sales and profits in the last two years. In fact, its global president and CEO Klaus Kleinfeld held its worldwide senior managing committee meeting in India in December 2005 to emphasise upon growing importance of the country and its commitment to make investments here.

Five years ago, ABB sales were just under Rs 800 crore, even after being here for six decades. Last year, ABB's business from India totalled over Rs 4500 crore and is growing quarter after quarter at 30%.

Even state-owned Bharat Heavy Electricals' profits doubled in last two years as its sales piped Rs 10800 crore.

But, the moot question remains: Why should companies in this sector be accorded better valuation than software companies which are also clipping at 30%?

There are many reasons that make Siemens, BHEL or L & T more valuable. For one, these companies are sitting on huge order book positions that will give them enough business for the next two years.

Siemens won a \$600 million project in Qatar and L&T is now bidding for projects of \$500-million and above, thanks to growing sales and cash from its cement business. HCC won a Rs 1,950 crore order to build a hydro power project in J&K. It is a shortage of such businesses with fantastic prospects that has warranted a total re-rating of this sector.

It plans to invest \$320 billion on roads, ports, dams and power stations by 2012, more than an earlier estimate of \$150 billion.

Why Infrastructure is Critical?

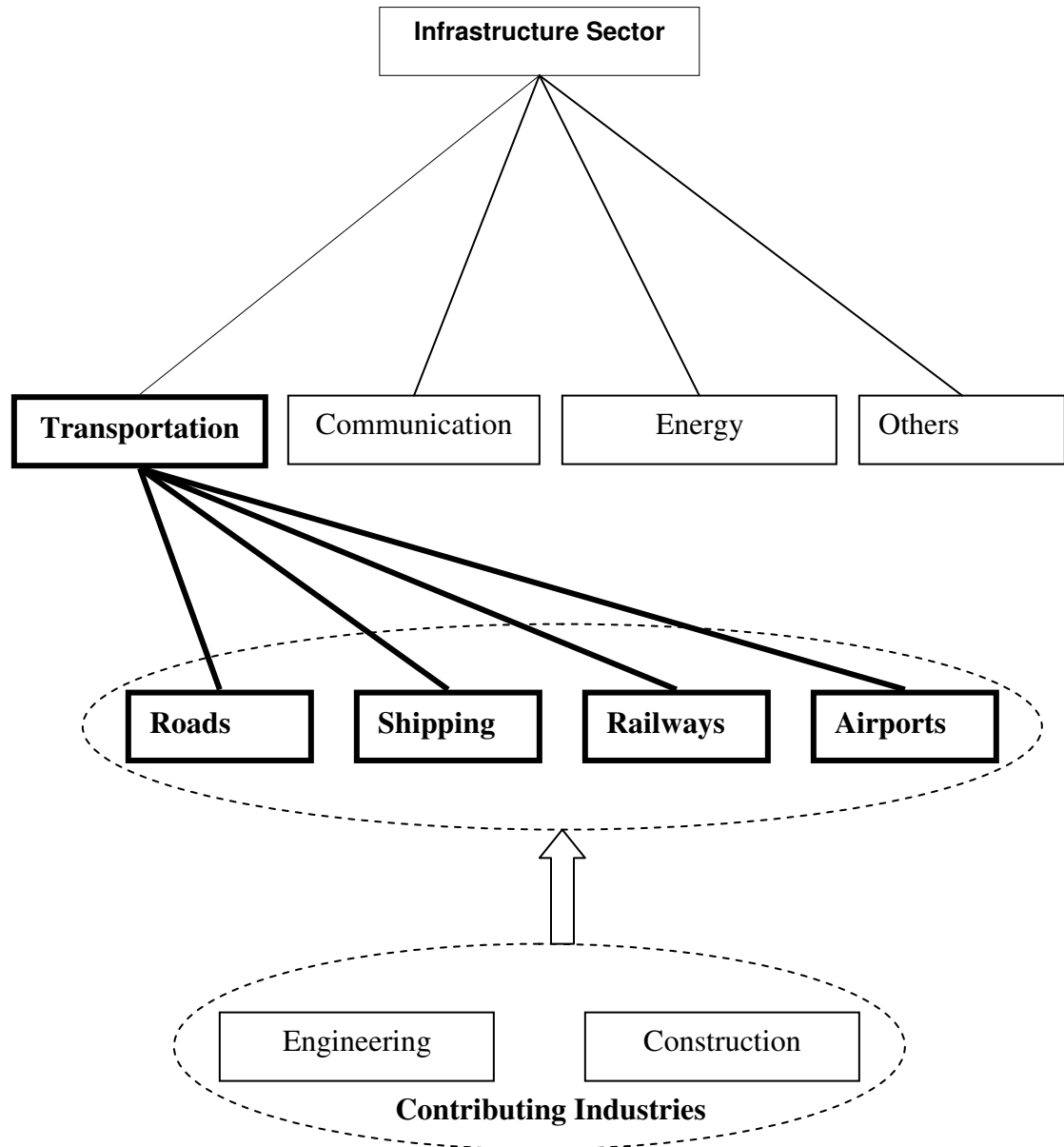
Investment in infrastructure is crucial to support a higher level of industrial growth. World Bank studies have estimated that a 1 per cent growth in infrastructure development translates into a 1 per cent growth in the economy.

India's immediate goal is to achieve industrial growth of at least 10 per cent per annum and sustainable GDP growth of at least 7 per cent per annum. Enhancing investment in infrastructure is critical to attaining these objectives.

India's infrastructure is grossly inadequate in comparison with world standards and already groaning under the weight of the growing economy. It has long been identified as one of the critical reasons holding back more rapid economic growth. A sharp and immediate step up in infrastructure spending is not just a prerequisite for boosting the economy; it could well represent the quickest way for growth.



Overview



Infrastructure is understood to be a priority in India, and the backbone for the economic growth. According to Planning Commission deputy chairman Montek Singh Ahluwalia the forecast for Indian infrastructure spend requirements range close to \$320 billion over FY 2007-12. With US\$ 191.51 billion of investment committed over the next five year, infrastructure sector is by far underinvested. The sector is estimated to grow at a CAGR of 15 per cent over the next few years.

In this report we will be analyzing the potential in construction and engineering areas within Infrastructure sector.



Category	Work Scope	Companies
Construction	<p>Roads and Highways</p> <ul style="list-style-type: none"> • Four Laning/Six Laning • Two-Laning with hard shoulders • Strengthening Weak Pavements • Bypasses, bridges, over bridges • safety and drainage measures • Expansion of Roadways. <p>Seaports</p> <ul style="list-style-type: none"> • Port development (construction of jetties, berths etc.) • Procurement, replacement or up gradation of port equipment • Deepening of channels for improvements in drafts <p>Airports</p> <ul style="list-style-type: none"> • Building new airports • Privatization of operations • Modernization of existing ports. <p>Railways</p> <ul style="list-style-type: none"> • Construction of dedicated freight corridor • Modernization of railway stations • Establishment of logistic parks • Building Agri-Warehouses 	<p>Gammon India, Hind.Construct. ITD Cement, IVRCL Infrastructure, Nag. Constructn., Simplex Infra., Unitech, Valecha Eng.</p>
Engineering	<p>Steel products Earthmoving Equipment Electrical Equipment Industrial Turbines Cement Machinery Metallurgical Machinery</p>	<p>ABB, Alfa Laval (I), Avery India, Baffin Engg., Batliboi, Bharat Earth Movers, Elecon Engg.Co, Engineers India, Flex Engineering, GMM Pfaudler, Guj. Inds. Power, Gujarat Apollo I, Hind.Dorr-Oliver, Incon Enginners, Kabra Extrusion, Kalindee Rail, Larsen & Toubro, L G Balakrishnan Mukand Engineers, NILE, Petron Egg., Shanthi Gears, Texmaco, Thermax, TRF, UB Engg., UT, Walchan. Inds., Windsor Machines</p>



Overview of Construction and Engineering sectors

Construction:

Construction is the second largest economic activity after agriculture in India. Construction accounts for 11 per cent of India's GDP and 50 per cent of its Gross Fixed Capital Formation (GFCF). It accounts for nearly 65 per cent of the total investment in infrastructure and is expected to be the biggest beneficiary of the surge in infrastructure investment over the next five years. The investment in this segment over the financial year 2005 to 2010 is estimated at US\$ 124.65 billion. The decision to liberalize norms of foreign direct investment in the construction sector is perhaps one of the more important economic policy decisions taken by Government. The Government has permitted 100 per cent foreign direct investment in the construction sector with the liberty to repatriate profits after a three-year period. The minimum capitalization requirement for a foreign investor is \$10 million for a wholly-owned foreign company and \$5 million if venturing with an Indian partner. (Source: IBEF)

Engineering:

The engineering sector is the largest segment of the overall Indian industrial sector. India has a strong engineering and capital goods base. The important groups within the engineering industry include machinery & instruments, primary and semi finished iron & steel, steel bars & rods, non-ferrous metals, electronic goods and project exports. The engineering sector employs over 4 million skilled and semi-skilled workers (direct and indirect).

The sector can be categorized into heavy engineering and light engineering segments. Heavy engineering segment forms the majority of the engineering sector in India. In the year 2003-04, out of the total engineering production of US\$ 22 billion, the heavy engineering market contributed over 80 per cent with the light engineering segment accounting for the remaining.

India has a well-developed and diversified industrial machinery/capital base capable of manufacturing the entire range of industrial machinery. The industry has also managed to successfully develop advanced manufacturing technology over the years. Among the developing countries, India is a major exporter of heavy and light engineering goods, producing a wide range of items. The bulk of capital goods required for power projects, fertilizer, cement, steel and petrochemical plants and mining equipment are made in India. The country also makes construction machinery, equipment for irrigation projects, diesel engines, tractors, transport vehicles, cotton textile and sugar mill machinery.

The engineering industry has shown capacity to manufacture large-size plants and equipment for various sectors like power, fertilizer and cement. Lately, air pollution control equipment is also being made in the country. The heavy electrical industry in India meets the entire domestic demand.

Players in the engineering sector in India can be categorized as follows:

- Equipment manufacturers such as Bharat Earth Movers Limited (BEML), Siemens, Cummins India, ABB, etc
- Execution specialists such as Bharat Heavy Electricals Ltd.(BHEL), Larsen &Toubro (L&T), Engineers India, etc and
- Niche players such as Thermax in environmental solutions, Voltas in electro-mechanical projects, ABB for automation technologies and so on.

A large number of multinational companies like Cummins, Alfa Laval, Sandvik Asia, etc. have also entered the engineering industry in India.



Positive Factors affecting the Demand

The growth in the infrastructure sector is being driven by a host of factors, which include:

Political Will:

The Government of India (GOI) has initiated an ambitious reform program, involving a shift from a controlled to an open market economy. Building further on the initiatives taken by the previous Government, the incumbent Government is undertaking several measures to enhance the quantum of investments in the infrastructure segment.

Funding from multi-lateral agencies:

Multilateral agencies such as the World Bank and the Asian Development Bank (ADB) are funding various infrastructure projects on a large scale in India. Other agencies include the Japan International Bank for Cooperation (JIBC) that funded the Delhi Metro (Underground Railway) Project. Various State Governments are mobilizing funds from these agencies to support rural roads and sanitation projects.

Increased private participation:

To encourage private sector participation in the sector, the Government has announced several tax breaks for investments. It is also devising return schemes that are attractive for the private participants, such as annuity payments and capital grants for road projects. Laws are being enacted to improve the finances of utilities and make their management more transparent, so as to improve returns on these facilities.

Innovative modes of funding:

The Government is tapping alternative sources of funds for infrastructure development. One of these is the cess on petrol and diesel, which is being used to fund road projects such as the Golden Quadrilateral and the North-South East-West corridor. It is also contemplating levying a tonnage tax on ships (to fund development of ports), and special taxes on air travel (for airports).

Growth Potential for Infrastructure

Gross Budgetary Support (GBS) for Infrastructure

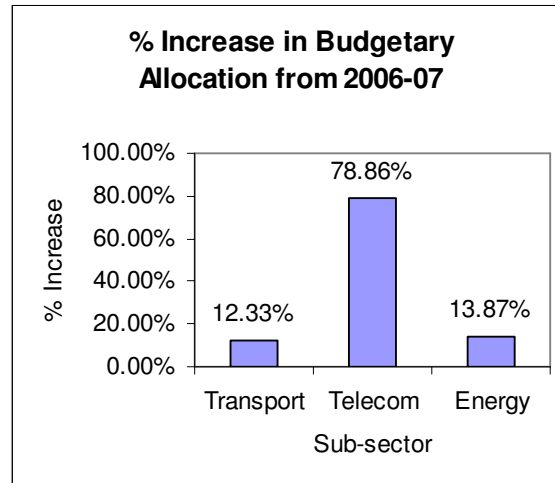
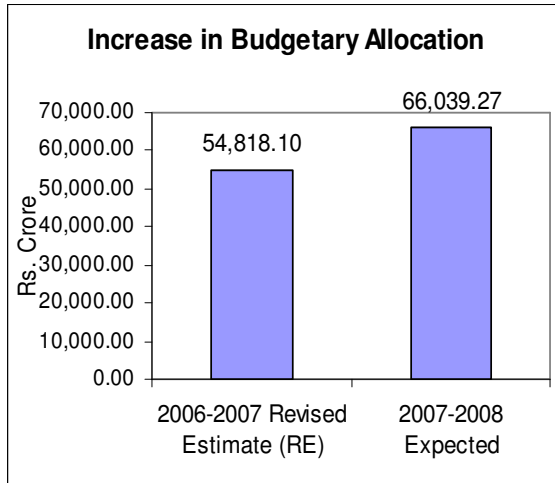
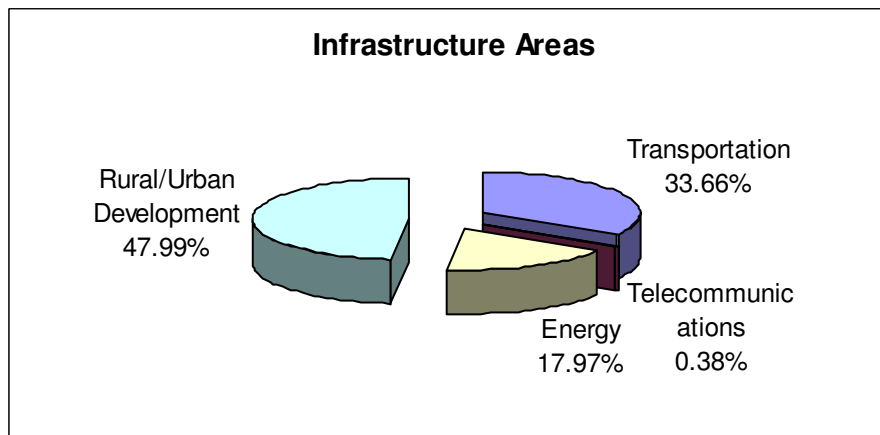
	2006-07	2006-07	2007-08	2007-08	% Increase
Ministry/Department	Budgetary Estimate (BE)	Revised Estimate (RE)	Proposed	Expected	From '06-07 (BE)
Transportation	19,155.80	11,505.09	25,892.10	21,517.33	12.33%
Telecom	218.61	175.85	1,324.90	391.00	78.86%
Energy	10,224.12	8,437.52	15,513.55	11,642.13	13.87%
Others	27,308.62	3,133.00	60,384.34	32,488.81	18.97%

Source: ET

According to a research, investment of over \$100 billion is to be raised through private sector participation, remainder to be raised through public investments for infrastructure projects. This investment in infrastructure is necessary to achieve a target growth rate of 9% for the Indian



economy in subsequent years. According to KPMG Advisory executive director Arvind Mahajan, total investments of about \$350 billion is required for infrastructure in the next five years.



a. Growth Potential in Roadways

Roads occupy an eminent position in India's transportation as they carry nearly 70 per cent of freight and 85 per cent of passenger traffic in the country. The focus of successive Governments on improving road connectivity across the country, has brought about significant investments in road development. Government expenditure on roads in India is significant - 12 per cent of capital and 3 per cent of total expenditure; however, road maintenance is grossly under-funded with only one third of needs being met. Recognising the present deficiencies in the road network, the Government of India has sought to address these through the Tenth National Plan (2002-2007), which has assigned a high priority to the National Highway Development Programme (NHDP).

Currently, India faces severe, and worsening, strain on capacity as annual growth in road length (less than 5 per cent) has been less than half the growth in traffic (over 10 per cent). What is worse, National and State highways, which are just 10 per cent of the nation's roads but carry 75 per cent of the traffic, have grown at an even lower rate. The emphasis, so far, has been on providing connectivity rather than ensuring mobility on the high density corridors.

One reason for slow growth in road capacity is that access to funds is restricted to inadequate budgetary allocations. The Rakesh Mohan committee estimated a need for Rs.



90,000 crore for National and State Highways over 1996-2006. However, total expenditure (Centre and States) in the Eighth Plan period (1992-97) was just around Rs. 13,000 crore.

- The number of vehicles has been growing at an average pace of 10.16 percent per annum over the last five years (1998-99 to 2002-03).
- National Highway Development Project (NHDP): National Highway Development Project has been initiated in order to improve and develop National Highways.

The common forms of Public Private Partnership in the road sector are:

- Design- Build- Finance-Operate (DBFO)
- Build-Operate-Transfer (Toll)
- Build- Operate- Transfer (Annuity)

Key Features of GoI Policy PSP in Road Sector

- Foreign Direct investments up to 100 per cent is permitted.
- NHAI can participate with up to 30 per cent of the total equity of a company floated to develop a road project.
- NHAI can provide capital grants to the developers of a road project on a case by case basis.
- Suitable traffic support/guarantee is provided on a case to case basis.
- Real estate development can be made an integral part of BOT projects to enhance their financial viability.
- Entrepreneurs to be protected against force including political, non-political and legislative changes.
- Dispute resolution of arbitration would be under the 1996 Indian Arbitration and Conciliation Act, incorporating United Nations Commission on International Trade Law (UNCITRAL) provisions.
- The ownership of the land for highway construction and roadside facilities continues to vest in Government. Mortgaging of such land is not allowed. However, land can be leased to entrepreneurs.
- Unified check barriers at the inter-state borders to be provided. Such barriers would be located outside the right-of-way with proper entry/ exit layout.

Projected Capital Investments

Scheme	Period 2001-2011 (Amount in Rs. Million)	Period 2011-2021 (Amount in Rs. Million)
Expressways	300,000	700,000
National Highway	1,200,000	1,30,000
State Highways	750,000	1,250,000

Source: World Bank

Funding Requirements in Future

According to the World Bank, there is a shortfall in infrastructure funding for the next ten years of US\$ 23.22 billion, representing 39 per cent of the total requirement. The study assumes that revenues generated on the highways are returned to the highway sector. The gap would increase if the assumption is not considered.



Potential:

The Government recognises the importance of private participation in development of roads in the country. It has taken the requisite policy measures to encourage private investments in the sector.

- Indian government has approved undertaking six laning of 6500 km of National Highways comprising 5700 km of Golden Quadrilateral and balance 800 km of other sections of National Highways under NHDPV at a cost of approx. \$9 billion. More than 86% of the investment is expected to come from the private sector. The projects are to be taken up on Build Operate and Transfer mode following a Design, Build, Finance and Operate (DBFO) pattern with a maximum of 10% Viability Gap Funding.
- The Public Private Partnership Appraisal Committee (PPPAC) has approved nine highway projects with an investment of US\$ 988.752 million (Rs 4,439 crore) under the third phase of the National Highway Development Programme (NHDP). The committee has so far approved 10 highway projects of NHAI involving a total investment of more than US\$ 1.11371 billion (Rs 5,000 crore) and also a port sector project.

b. Growth Potential in Ports

India occupies a strategic location on the global maritime map. Along its extensive coastline of 7,517 km, there are 12 major ports. Eleven major ports are Port Trusts, governed by the provisions of Major Port Trust Act, 1963 and the twelfth, Ennore Port, is the first major corporate port. In addition, there are 185 minor and intermediate ports spread across the nine coastal states. These are controlled by the respective states.

Indian ports handle 90 per cent of India's total foreign trade in terms of volume and 70 per cent in terms of value.

Ports sector set to attract US\$ 5.5 billion in the next five years

The Government of India (GOI) is using privatisation as a tool to expand existing port infrastructure (augmenting the existing capacities as well as developing greenfield ports). With the law relating to privatisation already in place, the ports sector is emerging as one of the most attractive opportunities for private sector investments.

Rampant growth in traffic – driving demand for additional capacity

The traffic handled at the ports has been growing steadily over the past decade. Following the liberalisation and opening of the Indian economy in the early 1990s, there has been a significant increase in India's maritime trade, with traffic increasing from 165 MTPA in 1991 to over 500 MTPA in 2004-05.

The Government has fixed an ambitious target of US\$ 150 billion for exports by the year 2008-09 to double India's share in world exports from nearly 0.8 to 1.5 per cent. Further, the Ministry of Shipping projects the port traffic to grow to a level of 650 MTPA by 2008. As a result, the Indian ports require capacity expansion on a large scale.

As opposed to the growth of 3.5-4 per cent in global trade, India has been registering a 10.4 per cent growth in containerised cargo and a 6 per cent growth in bulk cargo. India's 3.9 million TEUs (Twenty-foot Equivalent Units) in 2004-2005 is expected to grow to 4.4 million TEUs in 2005-06 accounting for 5-6 per cent of cargo in Asia. In the past five years, manufacturing exports from India have increased at a compounded annual growth rate of 14 per cent. Ores and minerals exports have increased 4.5 times in last 5 years.

Multiplicity of activities in the port sector makes its privatisation more complex than most other core sectors. This presents a range of options for private-sector involvement in ownership of port assets and operations. The most commonly adopted approach has been the unbundling of various assets and operations under a port, and privatising each of them separately.



Spurt in private investments follow recent reforms

Deregulation in the ports sector (100 per cent FDI is allowed) and attractive terms of BOT/BOOT/BOMT etc. are drawing a large number of domestic and foreign players to this sector.

In order to encourage private investment, the Government is planning to develop the Paradeep port under the BOT model. The project includes deepening of the channel to accommodate 1,25,000 dwt vessels for US\$ 34.2 million, developing deep draught iron ore berth on BOT basis at a cost of US\$ 72.9 million, developing a clean cargo berth at US\$ 30.7 million, replacement and procurement of four cranes at cost of US\$ 6.7 million and developing railway sidings at US\$ 5.6 million.

In addition, a new port at Ennore, 25 km north of Chennai has been constructed with Asian Development Bank's assistance and has been operationalised. The port has been developed through joint venture formation between major and minor ports.

Some of the major players in the construction industry have notched a presence in the ports segment; viz. Gammon India Ltd, Larson & Toubro, Skanska Cementation India Ltd., and Simplex Concrete Piles Ltd etc.

Some of the major international players in the sector are now looking at India as a key target market. Foreign investors in Indian ports include P&O Ports (Australia), Port of Singapore and International Seaports Ltd. Recently, the Singapore-based global cargo transportation and logistics major, Neptune Orient Lines (NOL), has made major investment plans in port development in India.

Projects worth US\$ 13.33 billion proposed under National Maritime Development Programme (NMDP). Under this programme, there are several projects to be completed over the next 10 years. The programme envisages an investment of over US\$ 13.33 billion for augmenting the present capacity and modernisation of the existing ports. The programme is proposed to be implemented through public-private partnership. The areas for which funds would be required can be categorised under the following three heads:

- Projects related to port development (construction of jetties, berths etc.)
- Procurement, replacement or up gradation of port equipment
- Deepening of channels for improvements in drafts

The estimated investment for above projects is US\$ 13.41 billion, out of which US\$ 2.54 billion will be raised through budgetary support, and an additional US\$ 1.13 billion will be funded through internal resources.

The rest of the investment of US\$ 8.72 billion will be mobilised from the private sector.

c. Growth Potential in Airports

India has 450 airports managed by Government agencies such as defence services, State Governments and the Airports Authority of India (AAI). The AAI manages a total of 120 Airports in the country, which include 11 International Airports, 81 domestic airports and 28 civil enclaves. Top 5 airports in the country handle 70 per cent of the passenger traffic out of which Delhi and Mumbai together account for 50 per cent traffic.

Upsurge in air traffic creating under-capacity

With air travel becoming more affordable the air traffic in India is witnessing rapid growth. Though the entry of low-cost air carriers is a key factor, industry analysts attribute the boom in air travel to India's economic upswing, increased FDI in various key industrial sectors, a flood of outsourcing firms, the growing popularity of India as a tourist destination and the consequent surge in the numbers of foreign travelers arriving in the country.



d. Growth Potential in Railways

Railways are working on an ambitious plan for development and modernization at a cost of Rs. 3,00,000 crore in the next five years. According to railway Minister Lalu Prasad Yadav, 40 per cent (Rs. 120,000) of this amount is expected to be generated through public private partnerships. Railways expect a capital surplus of Rs 20,000 crore by the end of the current fiscal year giving Railways the confidence to go ahead with the plan. (Source: ET)



Top Ten Companies for Investment

We recommend investment in the following companies within Construction and Engineering sectors –

	Company	Sales	Sales in (CAGR for FY04-FY 06)	Operating Profit Margin	Debt Equity ratio	Book value	CMP AS on 19/02/07	P/E ratio	Order book in crore (Approx)
1	Subhash Projects	367.61	45.01%	7.76%	1.22	26.06	241	16.64	2,800
2	Kalindee Rail	90.13	34.47%	10.35%	1.66	63.91	182	N/A	542
3	Punj Lloyd	686.32	24.27%	14.96%	2.29	38.94	945	85.17	11,428
4	Nagarjuna Construction	1840.44	34.40%	9.53%	0.57	91.18	194	25.12	6500-6800
5	IVRCL	1521.42	25.30%	6.11%	1.27	44.33	368	40.29	6200
6	Hindustan Construction	1986.99	23.38%	12.48%	1.39	34.72	126	33.04	9,672
7	Simplex Infrastructure	1342.8	27.93%	8.45%	0.48	270.87	344	32.08	4500
8	Siemens	4496.67	35.94%	12.35%	0	64.38	1197	49.69	7000
9	Thermax	1488.16	37.59%	14.30%	0	40.17	394	26.62	3,024
10	L&T	14739.98	15.30%	6.87%	0.42	335.57	1693	41.07	22300



Company Details

COMPANY NAME	PRICE CHART AS ON (20/02/2007)								
<p>Subhash Projects:</p> <p>a) The company operates in the field of water and waste management, hydro power and electrification projects. The company has worked on various water management projects such as potable water projects, lift irrigation projects and pipeline projects. SPML has expertise in setting up hydro power plant albeit of smaller capacity (35MW Rupin Hydro Power project), which opens up huge opportunity for the company in the high margin business.</p> <p>b) The company has key capabilities in executing water-related projects and electrical T&D projects for renovation & modernisation (R&M) of current power infrastructure and rural electrification (RE) projects.</p> <p>c) For 2006-07, the management targets to make it a Rs 1,000-crore company.</p>	 <p>Key Points</p> <table border="1"> <tr> <td>3 Yr CAGR</td> <td>45.01%</td> </tr> <tr> <td>Sales(Rs Crores)</td> <td>367</td> </tr> <tr> <td>Order book (Rs. Crores)</td> <td>2,800</td> </tr> <tr> <td>CMP (Rs)</td> <td>241</td> </tr> </table>	3 Yr CAGR	45.01%	Sales(Rs Crores)	367	Order book (Rs. Crores)	2,800	CMP (Rs)	241
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<p>Kalindee Rail:</p> <p>a) Kalindee Rail Nirman (Engineers) Limited is a leading domestic engineering & projects company involved in the execution of the major railway projects in India. Kalindee has executed various prestigious projects spread far and wide in the country including; Gauge Conversion Project from Meter Gauge to Broad Gauge, New Railway Line Construction, Modernisation of Railway yards. Upgradation of Railway Sidings in ports, Petroleum Sidings, Access Control Systems for Metro Rail, Fiber Optic Networks along railway tracks, signaling systems etc.</p> <p>b) Indian Railways have launched an ambitious program to enhance capacity to handle more traffic with speed and safety and have sanctioned a large number of signaling, telecom, track and bridge works. Urban Transport Authorities are introducing Metro Rail Systems</p>	 <p>Key Points</p> <table border="1"> <tr> <td>3 Yr CAGR</td> <td>34.47%</td> </tr> <tr> <td>Sales(Rs Crores)</td> <td>90</td> </tr> <tr> <td>Order book (Rs. Crores)</td> <td>542</td> </tr> <tr> <td>CMP(Rs.)</td> <td>182</td> </tr> </table>	3 Yr CAGR	34.47%	Sales(Rs Crores)	90	Order book (Rs. Crores)	542	CMP(Rs.)	182
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Punj Lloyd:

- Punj Lloyd Limited is an engineering and construction company providing integrated design, engineering, procurement, construction and project management services for energy industry and infrastructure sector projects.
- PL is consolidating its position as the second largest E&C player in India. The widening gap in revenues with respect to other mid-sized players is only a small part of the story. More importantly, it is increasing the capability gap. The Rs13bn offshore platform contract from ONGC is a case in point where it broke L&T's virtual monopoly in the sector.
- Decline in depreciation and interest costs as the proportion of revenues should drive an expansion in net margins, driving 94% CAGR in profits over FY06–09E. Increasing asset utilization efficiency should drive an improvement in profitability ratios.
- PL has fully exploited the capex upsurge in the core areas of competence – pipeline and petrochemical projects in overseas markets and the uptick in domestic infrastructure spend. Book-to-bill ratio of 3.7x as at end 3QFY07, driven by order intake of Rs125bn over FY06-07 is expected to translate into 61% revenue CAGR over FY06–09E.



Key Points

3 Yr CAGR	24.27%
Sales(Rs Crores)	686
Order book (Rs. Crores)	11,428
CMP (Rs)	945

Nagarjun Construction:

- Nagarjuna Construction Company Limited was set up in 1978. Its principal activities include industrial construction, housing development projects, plant and non-plant construction for nuclear projects, hospitals, roads and bridges including national highways, fabrication and erection of structural steel works, underground drainage and sewerage, stadiums etc.
- It also manufactures construction equipment and generates power from wind farms.
- Apart from the conventional construction methods, the company adopts the NBS Cellular System, developed in collaboration with Byyging Uddheman AB of Sweden and NCC Pre Fab System, which is developed in house.
- The grant of industry status and expression of interest by foreign investors a couple of years ago have triggered the construction sector.



Key Points

3 Yr CAGR	34.40%
Sales(Rs Crores)	1840
Order book (Rs. Crores)	6,500
CMP (Rs)	194



IVRCL Infrastructure:

- a) IVRCL Infrastructures & Projects Ltd., (formerly, IVR Constructions Limited) commenced operations in 1990 and has established itself as a EPCC & LSTK service provider with front-end engineering capabilities. Commencing operations with building construction as Class I contractor-firm in 1987,
- b) IVRCL forayed into various social infrastructure sectors like water transmission, treatment, solid waste management, roads and highways, bridges, power transmission lines with attendant engineering capabilities.
- c) IVRCL is planning to diversify and strengthen pre-qualifications (so as to bid for road, power and building projects) by entering into joint ventures and through various acquisitions. The company acquired Hindustan Dorr. It is sourcing 150 engineers from a KPO of its recently acquired subsidiary to strengthen the design aspect for all infrastructure projects ranging from water, power, transport, and buildings and industrial structures as well.



Key Points

3 Yr CAGR	25.30%
Sales(Rs Crores)	1521
Order book (Rs. Crores)	6200
CMP (Rs)	368

Hindustan Construction :

- a) Hindustan Construction Company, founded in 1926, is a private engineering construction company in India. HCC is the architect behind many firsts among projects in India, such as the world's longest barrage - the Farraka Barrage, West Bengal, India's first underground metro in Kolkata, and the first 6 lane Mumbai-Pune Expressway.
- b) The company employs and manages over 20,000 site labour all over India at various project locations. The principal areas of operation include power, roads and bridges, dams and barrages, marine works, buildings and environmental projects.
- c) The company is well-positioned to capitalise on the opportunities offered by expected surge in infrastructure investment



Key Points

3 Yr CAGR	9.45%
Sales(Rs Crores)	1467
Order book (Rs. Crores)	9,672
CMP (Rs)	126



Simplex Infrastructure:

- e) Simplex Infrastructures Ltd., is one of the largest infrastructure solutions providers today, having presence across seven fast-growing industry verticals - piling, power, industrial construction, urban infrastructure, marine, highrise buildings, roads and bridges.
- f) Simplex has been associated with high profile projects like the Howrah Bridge, Reliance Jamnagar refinery, Tata steel plant in Jamshedpur, the Supreme Court in New Delhi and more. Incorporated in 1924 as a British piling firm, was until recently known as Simplex Concrete Pile (India) Ltd. and became Indian-owned following Independence in



Key Points



<p>1947.</p> <p>g) It is buoyant about overseas markets and is targeting 30% of the turnover from project exports with its experience in handling large scale infrastructure projects.</p>	<table border="1"> <tr> <td>3 Yr CAGR</td> <td>27.93%</td> </tr> <tr> <td>Sales(Rs Crores)</td> <td>1342.8</td> </tr> <tr> <td>Order book (Rs. Crores)</td> <td>4500</td> </tr> <tr> <td>CMP (Rs)</td> <td>344</td> </tr> </table>	3 Yr CAGR	27.93%	Sales(Rs Crores)	1342.8	Order book (Rs. Crores)	4500	CMP (Rs)	344		
3 Yr CAGR	27.93%										
Sales(Rs Crores)	1342.8										
Order book (Rs. Crores)	4500										
CMP (Rs)	344										
<p>Siemens:</p> <p>a) Siemens (SL), the 55% Indian subsidiary of Siemens AG, Germany is a leader in the electrical and electronic engineering sector. It offers products, systems, solutions and services in power generation, power transmission & distribution, automation & drives, industrial solutions & services, transportation systems, enterprise communications, mobile phones and medical solutions.</p> <p>b) Multinational companies operating in India are receiving significant orders for products and services, further strengthening their market position within the sector.</p> <p>c) Siemens is bidding for large contracts and the Indian subsidiary will be a key partner for many global markets. Siemens has decided to invest \$500 million on its Indian operations in the next few years to boost growth.</p>	 <table border="1"> <tr> <td colspan="2">Key Points</td> </tr> <tr> <td>3 Yr CAGR</td> <td>35.94%</td> </tr> <tr> <td>Sales(Rs Crores)</td> <td>4496</td> </tr> <tr> <td>Order book (Rs. Crores)</td> <td>7000</td> </tr> <tr> <td>CMP (Rs)</td> <td>1197</td> </tr> </table>	Key Points		3 Yr CAGR	35.94%	Sales(Rs Crores)	4496	Order book (Rs. Crores)	7000	CMP (Rs)	1197
Key Points											
3 Yr CAGR	35.94%										
Sales(Rs Crores)	4496										
Order book (Rs. Crores)	7000										
CMP (Rs)	1197										
<p>Thermax:</p> <p>a) Thermax was incorporated in the year 1980 as Thermo Dynamics Pvt. Limited. It offers products and services in heating, cooling, waste heat recovery, captive power, water treatment and recycling, waste management and performance chemicals.</p> <p>b) The company has joint ventures and alliances with Babcock & Wilcox USA, Kawasaki Thermal Engineering Company, Japan; Eco Tech, Canada; Honeywell, USA; Bloom Engineering, Germany and Struthers Wells and Ozone Systems, USA. Thermax Babcock & Wilcox is currently a wholly owned subsidiary of the company.</p> <p>c) The major products of the company are boilers and heaters, water/wastewater reuse and recycling plants, absorption cooling solutions, pollution control equipment and captive power plants that operate on a variety of fuels. The company also manufactures a range of resins, specialty chemicals and cleaning compounds.</p>	 <table border="1"> <tr> <td colspan="2">Key Points</td> </tr> <tr> <td>3 Yr CAGR</td> <td>37.59%</td> </tr> <tr> <td>Sales(Rs Crores)</td> <td>1488</td> </tr> <tr> <td>Order book (Rs. Crores)</td> <td>3,024</td> </tr> <tr> <td>CMP (Rs)</td> <td>394</td> </tr> </table>	Key Points		3 Yr CAGR	37.59%	Sales(Rs Crores)	1488	Order book (Rs. Crores)	3,024	CMP (Rs)	394
Key Points											
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Order book (Rs. Crores)	3,024										
CMP (Rs)	394										



TURNKEY ENGINEERS

Larsen & Toubro:

- a) Larsen & Toubro is the country's largest engineering and construction company. The company was founded in 1938 by two Danish engineers, Henning Holck-Larsen and Soren Kristian Toubro. Beginning with the import of machinery from Europe,
- b) The company's businesses are divided into six key segments. Engineering and construction, heavy engineering, construction, electrical and electronics, information technology and machinery & industrial products.
- c) L&T has also expanded its focus to the Middle East, South East Asia, Russia, CIS, Mauritius, African and SAARC countries. L&T is currently developing markets for its construction services in the Indian Ocean rim countries, Africa and Latin America. As a traditional manufacturer of a wide range of electrical and electronic products and systems, the company is India's largest manufacturer of low tension switchgear.



Key Points

3 Yr CAGR	15.30%
Sales(Rs Crores)	14739
Order book (Rs. Crores)	22300
CMP (Rs)	1693

Conclusion

The infrastructure sector is expected to grow at a CAGR of 15 per cent over the next few years. We expect companies in construction sector to benefit the most from the growth in infrastructure sector. It accounts for nearly 65 per cent of the total investment in infrastructure and is expected to be the biggest beneficiary of the surge in infrastructure investment over the next five years. While Engineering sector is also continues to ride a boom and post good numbers as this sector has clocked sales growth of 33% and profit Growth of over 50% on the aggregate basis for the quarter ended December 2006. This outlook is backed by continued increase in order backlog. Order intake and order backlog continues to rise by 40 % to 60 % for most of the companies in engineering sector.



ANNEXURE-1

FINANCIAL SUMMARY OF CONSTRUCTION COMPANIES

S.No	Company name	Sales(Rs in crores)			CAGR sales for 3 years	Profitability ratio		Liquidity ratio	Leverage ratio	
		2004	2005	2006		Net profit margin	Operating profit margin	Current ratio	Debt Equity ratio	Interest cover ratio
1	Gammon India	1119.72	866.68	1467.93	9.45%	7.09%	14.68%	1.52	0.4	2.65
2	Hindustan Construction	1057.94	1487.34	1986.99	23.38%	6.28%	12.48%	1.5	1.39	2.62
3	ITD cements	564.21	557.41	481.05	-5.18%	0.78%	6.89%	1.01	1.93	1.06
4	IVRCL	773.45	1054.73	1521.42	25.30%	6.11%	9.93%	1.38	1.27	3.85
5	Jaiprakash Associates	2,438.68	2,814.52	3,163.02	9.06%	19.23	22.26	1.84	1.93	2.92
5	Nag. Construction	758.16	1188.5	1840.44	34.40%	5.65%	9.53%	2.51	0.57	5.07
6	Simplex Infrastructure	641.4	999.07	1342.8	27.93%	3.10%	8.45%	1.09	0.48	2.37
7	UNITECH	373.95	509.33	653.13	20.43%	10.66%	22.71%	1.12	1.59	3.91
8	Valecha Eng	117.11	145.49	151.38	8.93%	17.71%	23.37%	1.92	0.49	10.24
	AVERAGE					22.04%	25.93%			

MARKET SUMMARY OF CONSTRUCTION COMPANIES

S.No	Company name	Market data (in Rs.)						Market return
		EPS	Book Value	P/E	CMP (19.02.07)	52 Wk High	52 Wk Low	1st year (2006)
1	Gammon India	9.24	97.06	32.08	380.35	588.95	276	1.62%
2	Hindustan Construction	4.77	34.72	33.04	122.9	195.7	82.9	N/A
3	ITD cements	8.11	108.29	82.81	575.05	1513.51	445.34	N/A
4	IVRCL	8.55	44.33	40.29	361.65	460	164	-49.51%
5	Jaiprakash Associates	29.76	99.77	39.22	630.45	753	280	91.23%
5	Nag Construction	9.83	91.18	25.12	194.35	236	97.5	-24.71%
6	Simplex Infrastructure	47.68	270.87	32.08	343.35	545	213	N/A
7	UNITECH	53.93	179.78	52.53	417.6	544.4	20.1	-57.65%
8	Valecha Eng	38.32	170.43	14.36	247.1	410.3	125	16.365
	AVERAGE			39.05				



FINANCIAL SUMMARY OF ENGINEERING COMPANIES

Company name	Sales(Rs. in crores)			CAGR of Net sales for three years	Profitability ratio		Liquidity ratio	Leverage ratio	
	2004	2005	2006		Net profit margin	Operating profit margin	Current ratio	Debt Equity ratio	Interest cover ratio
ABB	2260.22	2963.05	N/A	14.50%	7.38%	12.24%	1.4	0	26.33
Alfa Laval(I)	504.45	577.79	0	7.02%	11.23%	18.68%	1.58	0	1.58
Avery India	68.8	65.58	64.89	-1.93%	7.23%	9.48%	2.23	0	40.03
Batlboi Ltd	60.62	81.59	100.64	18.41%	8.52%	15.67%	0.98	0.33	9.27
Bhart Earth Movers	1667.35	1729.68	2056.32	7.24%	9.09%	14.92%	1.5	0.06	40.32
Crompton Greaves	1695.58	2041.05	2541.61	14.45%	6.42%	10.52%	1.29	0.62	7.84
Cummins	936.03	1196.99	1478.59	16.46%	11.88%	18.96%	1.93	0.03	274.18
Elecon Engineers	166.04	287.73	456.51	40.09%	6.11%	15.03%	1.21	0.69	3.25
Elgi Equipment	290.51	285.27	312.07	2.42%	5.65%	11.98%	1.63	0.06	26.19
Flex engineering	161.9	51.87	39.41	-37.56%	5.05%	14.56%	3.18	0.86	3.84
GMM Pfaudler	58.65	80.31	101.66	20.12%	12.02%	21.05%	1.32	0.07	22.17
Gujarat Industries Power	745.4	744.67	756.59	0.50%	15.17%	42.43%	0.69	0.93	4.02
Incon Engineers	0.44	0.26	0.61	11.50%	-21.31%	-11.48%	3.11	0	-11.48
Ircon Intl.	697.72	964.56	1058.08	14.89%	7.62%	13.00%	1.5	0	17.8
Kalindee Rail	37.07	54.08	90.13	34.47%	4.01%	10.35%	1.33	1.66	3.2
Kabra Extrusion	80.05	70.15	100.51	7.88%	6.29%	10.37%	1.76	0.14	23.45



Kiroloskar oil	1001.73	1147.24	1394.1	11.65%	14.39%	20.41%	1.17	0.09	15.88
LG Bala krishnana	270.6	368.92	416.13	15.43%	3.27%	14.62%	1.02	1.78	2.13
NILE	28.66	44.91	56.9	25.68%	4.59%	11.05%	1.46	0.81	3.06
Patel Engg.	1028.07	1496.01	1410.88	11.13%	2.49%	12.39%	1.91	0.64	1.85
Punj Lloyd	357.62	464.42	686.32	24.27%	10.56%	14.96%	2.24	2.29	4.06
Sandwick Asia	68.64	135.07	197.65	42.27%	12.46%	25.33%	1.42	6.11	187.43
Shanthy Gears	85.84	121.71	162.3	23.65%	17.29%	37.52%	1.98	1.07	9.41
Siemens	1790.03	2734.24	4496.67	35.94%	8.01%	12.35%	1.08	0	95.66
Subhash Projects	120.56	229.93	367.61	45.01%	23.82%	7.76%	0.08	1.22	1.39
TEXMACO	166.77	281.86	363.01	29.60%	5.24%	11.17%	1.13	0.47	4.42
Thermax	571.34	916.74	1488.16	37.59%	8.28%	14.30%	0.94	0	38.46
TRF	169.8	198.43	214.6	8.12%	3.30%	8.55%	1.2	1.3	3.12
UB Engineering	74.75	149.17	229.13	45.26%	-8.52%	-1.93%	0.9	0	-0.31
UT	48.2	58.61	88.36	22.39%	3.02%	4.35%	1.2	1.28	1.79
Voltas	1273.2	1386.66	1853.14	13.33%	3.80%	5.78%	1.05	0.41	26.66
Walchan.Inds.	204.76	252.8	358.41	20.52%	3.71%	8.59%	1.24	0.38	4.72
Windsor machines	78.87	101.22	100.01	8.24%	-26.85%	-16.85%	0.78	0	3.13
AVERAGE					5.74%	12.68%			



MARKET SUMMARY OF ENGINEERING COMPANIES:

S. No	Company name	EPS (in Rs.)	Book Value (in Rs.)	P/E	CMP (19.02.07)	52 Wk High	52 Wk Low	Market return
9	ABB	50.48	209.78	53.9	3,824.60	3945(15/02/07)	1920(15/02/2007)	86.89%
10	Alfa Laval(I)	32.21	119.08	22.54	823	1280	740	-18.37%
11	Avery India	4.77	37.91	14.46	58.8	78.15	38.85	N/A
12	Batlboi Ltd	6.1	22.49	13.06	110.75	198.95	66	N/A
13	Bhart Earth Movers	49.72	238.6	21.97	1,137.65	1785	723.2	-9.93%
14	Crompton Greaves	30.15	99.51	41.07	201.4	234.4	102.66	-72.40%
15	Cummins	8.31	39.61	24.1	276.35	97	52.25	71.24%
16	Elecon Engineers	48.07	179.81	25.39	405	477.8	144.05	N/A
17	Elegi Equipment	2.67	19.36	19.5	55	97	52.25	-4.49%
18	Flex engineering	1.16	37.48	N/A	N/A	N/A	N/A	86.35%
19	GMM Pfaudler	40.17	210.27		137.1	208.88	92	N/A
20	Gujarat Industries Power	7.42	61.54	6.27	212.15	82.95	45.05	-9.72%
21	Incon Engineers	0	2.75	N/A	N/A	7.78	3.25	N/A
22	Ircon Intl.	77.83	837.68	N/A	N/A	N/A	N/A	N/A
23	Kabra Extrusion	8.57	63.91	6.69	98.1	130.5	65.7	-8.09%
24	Kalindee Rail	7.15	66.9	20.15	178.55	195	74	N/A



25	Kiroloskar oil	20.1	73.98	17.23	255.3	330	154	N/A
26	LG Bala krishnana	1.69	11.86	15.63	24.7	43.3	20.65	-35.76%
27	NILE	8.27	57.37	0	N/A	125	62.75	N/A
28	Patel Engg.	6.59	202.04	25.16	409	1254.9	544	N/A
29	Punj Lloyd	14.3	38.94	85.17	933.2	635	222	27.86%
30	Sandwick Asia	373.78	1027.32	N/A	N/A	0	0	N/A
31	Shanthy Gears	3.42	8.98	0	69	92.5	49.9	16.80%
32	Siemens	20.83	64.38	49.69	1,198.70	1408	741.1	-68.66%
33	Subhash Projects	6.77	26.06	16.64	230.05	273	100.4	81.87%
34.	Texmaco	17.99	120.79	41.83	1,006.30	1427.75	480.7	153.94%
35.	Thermax	9.22	40.17	26.62	391.55	434.25	206	-60.58%
36.	TRF	12.31	77.69	20.44	538.3	640	222	N/A
37.	UB Engineering	0	-26.94	N/A	44.75	97.4	26.1	N/A
38.	UT	4.39	32.45	N/A	N/A	146.7	38	N/A
39.	Voltas	20.48	73.02	37.34	100.1	120.5	63.51	N/A
40.	Walchan.Inds	0.38	306.9	31.83	2,050.75	2004.15	601.25	55.99%
41.	Windsor machines	0	-66.17	5.19	16.6	28.4	10.8	39.50%
	AVERAGE			25.20				



FINANCIAL SUMMARY OF TURNKEY ENGINEERS COMPANIES

S.No	Company Name	2004	2005	2006	CAGR of sales for three years	Net profit margin	Operating profit margin	Current ratio	Debt Equity ratio	Interest cover ratio
42.	BHEL	8009.69	9516.49	13442.57	18.84%	11.39%	19.46%	1.54	0.08	44.65
43.	Engineers India	1281.84	910.22	792.66	-14.80%	17.49%	26.70%	1.8	0	86.38
44.	Hind Dorr-Oliver	73.66	83.81	141.41	24.28%	4.58%	7.45%	2.09	0.38	4.05
45.	Larsen and Toubro	9616.68	13146.94	14739.98	15.30%	6.87%	11.28%	1.35	0.42	7.85
47.	Mukund Engineers	13.52	26.64	19.06	12.13%	7.97%	36.20%	1.62	0.79	1.26
48.	Petron Engineers	174.16	237.87	302.65	20.23%	2.69%	8.01%	1.26	0.76	2.27
	AVERAGE					7.92%	17.93%			

MARKET SUMMARY OF TURN KEY ENGINEERS COMPANIES

S.No	Company Name	EPS (in Rs.)	Book Value (in Rs.)	P/E	CMP (19.02.07)	52 Wk High	2 Wk Low	Market return
42.	BHEL	66.57	298.31	26.85	2,361.10	2668	1531.2	67.82%
43.	Engineers India	23.56	169.22	20.25	510.6	920	392.1	-26.20%
44.	Hind Dorr-Oliver	10.88	153.47	28.36	94.45	174.83	54.54	N/A
45.	Larsen and Toubro	70.58	335.57	41.07	1,667.80	1700	902.63	N/A
47.	Mukund Engineers	1.21	28.43	22.14	32.25	45	19.15	-7.89%
48.	Petron Engineers	10.65	71.71	13.16	146.15	243	110.25	-23.40%
	AVERAGE			24.99				



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