

Bharat Electronics

STOCK INFO. BSE Sensex: 10,573	BLOOMBERG BHE IN	24 May 2006	Buy
S&P CNX: 3,116	REUTERS CODE BAJE.BO	<i>Initiating Coverage</i>	Rs1,096

On high ground

India's largest defense-equipment company, with very limited competition

Leveraging acquired strengths to launch products for civilian markets and exports

A potential outsourcing candidate for overseas defense equipment requirements

Management guidance of 19% revenue CAGR till FY12

Buy with a target price of Rs1,480 – a 35% upside

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Y/E MARCH	2005	2006	2007E	2008E
Net Sales (Rs m)	31,969	35,459	41,623	49,551
EBITDA (Rs m)	6,958	8,574	10,078	12,154
PAT (Rs m)	4,463	5,811	6,871	8,448
EPS (Rs)	55.8	72.6	85.9	105.6
EPS Growth (%)	41.2	30.2	18.2	23.0
BV/Share (Rs)	198.7	254.4	321.1	404.2
P/E (x)	19.6	15.1	12.8	10.4
P/BV (x)	5.5	4.3	3.4	2.7
EV/EBITDA (x)	9.3	8.0	5.9	4.4
EV/Sales (x)	2.3	2.0	1.5	1.1
RoE (%)	22.7	21.8	20.1	19.4
RoCE (%)	35.3	35.0	31.6	30.5

KEY FINANCIALS

Shares Outstanding (m)	80.0
Market Cap. (Rs b)	87.6
Market Cap. (US\$ b)	1.9
Past 2 yrs Sales Growth (%)	13.5
Past 2 yrs PAT Growth (%)	35.6
Dividend Payout (%)	20.6
Dividend Yield (%)	1.4

STOCK DATA

52-Week Range (Rs)	1,472/678
Major Shareholders (as of March 2006)	(%)
Government of India	75.9
Domestic Institutions	6.6
FII/FDIs	12.3
Public	5.2
Average Daily Turnover	
Volume ('000 shares)	197.1
Value (Rs million)	211.3
1/6/12 Month Rel. Performance (%)	-7/11/-21
1/6/12 Month Abs. Performance (%)	-19/32/40

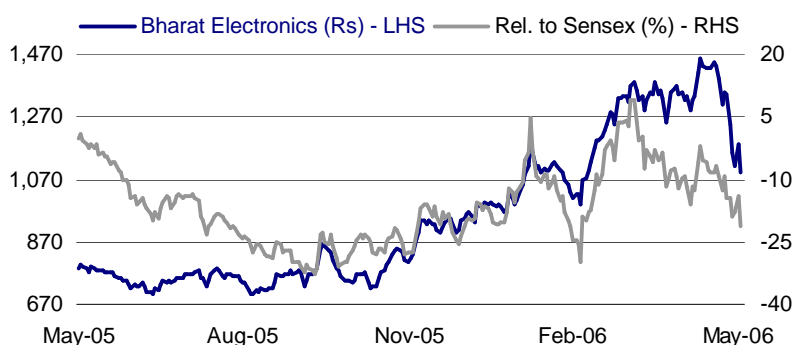
Exceptional track record: BEL is one of India's largest defense equipment company, accounting for 3.6% of defense expenditure and 9% of defense capex. Since FY99, it has delivered 17% revenue CAGR and 40% earnings CAGR. The management has guided for a 19% revenue CAGR to Rs100b by FY12.

Strong operating dynamics: BEL operates in a non-cyclical, non-capital intensive, near monopoly, cash cow business, with sizeable entry barriers. Ministry of Defense scouts for the latest technology and passes on the information to BEL, which manages the entire delivery. The company has also leveraged the defense business to penetrate civilian and export markets.

Favorable recent policy changes: The Indian government has decided that 30% of the value of foreign defense contracts over Rs3b should be offset by purchases, investments and transfer of technology in India. Offsets would entail that BEL's exports, which were largely to third world countries, would now be targeted also towards developed countries. Further, the company's strong R&D capability, manufacturing expertise and ability to cut costs by 60-65% post indigenization make it a strong contestant for outsourcing opportunities.

Valuations attractive, recommend Buy: BEL trades at 12.8x FY07E and 10.4x FY08E (a 21% EPS CAGR). We arrive at a price target of Rs1,480/share based on 14x FY08E PER. **Buy.**

STOCK PERFORMANCE (1 YEAR)



Defense business: strong momentum

India's defense spending growing at 9.5% CAGR

India is one of the top-15 spenders on defense...

India is amongst the top 15 military spenders globally and has the second largest army in the world after China. Over the past few years, India's defense expenditure has increased significantly from Rs471b in FY00 to Rs830b in FY06 and stands at Rs890b as per the budget estimates for FY07; a CAGR of 9.5%.

TREND IN INDIA'S TOTAL DEFENSE SPENDING (RS B)

	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07E
GDP	17,923	19,302	20,974	22,556	25,434	28,439	31,994	35,833
% YoY		7.7	8.7	7.5	12.8	11.8	12.5	12.0
Defense	471	496	543	557	603	770	830	890
% YoY		5.3	9.5	2.6	8.3	27.7	7.8	7.2
Defense (% of GDP)	2.6	2.6	2.6	2.5	2.4	2.7	2.6	2.6

Source: Company/Motilal Oswal Securities

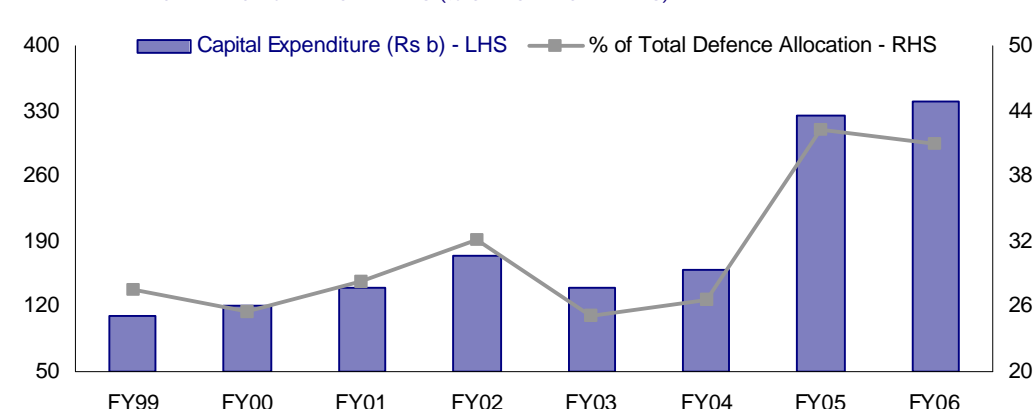
Apart from the rising defence spend, the share of capital expenditure in the total spend has also been increasing from 27.6% in FY99 to 42.1% in FY07. This increase has been largely driven by the Kargill War which exposed the outdated nature of defense equipment. Further, the sector requires constant innovation and upgradation, which results in higher capital expenditure.

BREAK-UP OF INDIA'S DEFENSE SPENDING (RS B)

	FY99	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07E
Revenue	289	351	356	368	408	434	435	499	515
Capex	110	120	140	175	149	169	335	331	375
Total	399	471	496	543	557	603	770	830	890

Source: Budget Documents/Motilal Oswal Securities

TREND IN INDIA'S DEFENSE CAPEX SPENDING (% OF TOTAL SPENDING)



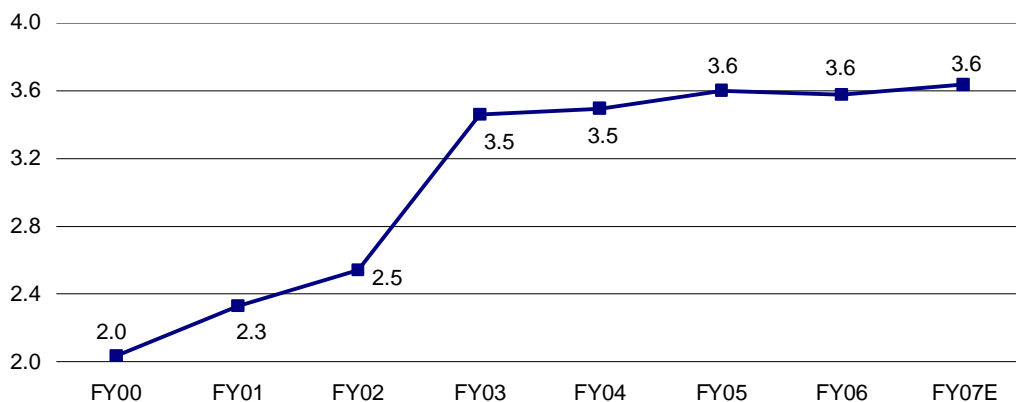
Source: Budget Documents/Motilal Oswal Securities

...and BEL is one of India's largest defense equipment company...

BEL is, by far, India's largest defense equipment company

BEL is one of India's largest defense equipment company, accounting for 3.6% of India's total defence expenditure and 9% of India's defense capex. Ministry of Defense is laying strong emphasis on the modernization of the country's defense infrastructure, with state of the art communication and electronic devices.

BEL'S SHARE OF THE DEFENSE SPENDING PIE (%)



Source: Company/Motilal Oswal Securities

BEL'S ADDRESSABLE MARKET IS GROWING: TREND IN DEFENCE CAPEX SPENDING (RS B)

	2003		2004		2005		2006		2007	%
	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	ACTUAL	BUDGET	REVISED	BUDGET	YOY
Land	0.6	0.4	0.2	0.4	0.4	0.4	1.2	0.7	0.9	22.1
Construction	11.9	11.1	17.0	13.8	20.2	20.2	28.2	25.5	30.7	20.3
Aircraft	69.3	53.2	67.1	55.1	147.2	147.2	117.6	123.0	137.5	11.7
H&M Vehicles	2.2	1.0	1.1	1.4	4.2	4.2	5.2	5.8	6.1	4.9
Other Equipment	88.4	52.0	54.3	54.8	85.2	85.2	94.9	90.7	103.5	14.1
Naval Fleet	24.7	17.2	50.2	25.5	44.6	44.6	54.2	47.9	55.8	16.4
Naval Dockyards	4.0	4.7	5.4	6.7	9.5	9.5	7.2	6.1	7.5	23.3
R&D	9.6	7.6	9.0	7.6	16.6	16.6	25.4	25.3	24.5	-3.4
Other Capex	3.4	2.0	5.2	3.8	7.0	7.0	9.8	5.6	8.2	46.9
Total Capex	214.1	149.1	209.5	169.1	334.8	334.8	343.7	330.8	374.6	13.3

Source: Company/Motilal Oswal Securities

BEL's addressable market →

...on which the government's reliance has been rising, especially after sanctions on imports from US and Europe

The Indian Government has started giving considerable importance to indigenization, especially after sanctions were imposed on imports from US and European countries, post the nuclear tests in 1998. This scenario highlighted a tremendous urgency towards indigenization, as the country sourced a significant part of vital components from these countries. BEL has been successful in negating the adverse repercussions to a large extent by achieving significant indigenization of materials, components and sub-assemblies for major equipment.

Few events which led to favorable business environment for BEL are:

- ✦ **The fall of Russia in 1991** resulted in problems in terms of availability of spares, as India sourced most of its military requirements from Russia.
- ✦ **Sanctions imposed post the nuclear tests in 1998** stressed the need to indigenize production.
- ✦ **Kargil conflict** which actually exposed the unpreparedness and outdated nature of the country's defence equipment, stressing the need for modernization.

Impeccable positioning

BEL has an impeccable positioning in defense communication, radars and electronic warfare in India, a direct result of its strong base in R&D and manufacturing skills. The Ministry of Defense scouts for the latest technology and passes on the information to BEL, which manages the entire delivery: technology tie ups, technology absorption, manufacturing, product trials, life time spares and service support, etc. In fact, this is the biggest strength for BEL, which has been demonstrated over and again consistently.

BEL has a comprehensive portfolio of communication and surveillance products

- ✦ **Comprehensive product portfolio:** Over the years, the company has been successful in building an impeccable portfolio of products which can now cater to the entire communication and surveillance requirements of the Indian armed forces.

BEL'S PRODUCT PORTFOLIO

PRODUCTS AND SERVICES	CUSTOMERS
Defence Communication	Indian Defense Services, Para-military forces
Radars & Sonars	Indian Defense Services, Civil Aviation, Meteorological Department, Space Department
Telecommunication	Department of Telecommunication, Para-military forces, Power sector, Oil Industry, Railways
Broadcasting Equipments and Studio Systems	All India Radio, Doordarshan, (National Radio & TV Broadcasters)
Electronic Voting Machine	Election Commission of India
Solar Products & Systems	Individuals, Private and Government organizations
Turnkey Systems, E-Governance Networks	Police, State governments, Public sector undertakings
Components	All India Radio and Doordarshan (National Radio & TV Broadcasters), Instrumentation Industry, Switching Industry, Entertainment Industry, Telephone Industry

- ✦ **Technology sourcing:** BEL manufactures products on instruction from the Ministry of Defense, which scouts for the latest in technology and then passes on the information. BEL then collaborates with global players.

BEL'S TECHNOLOGICAL TIE-UPS

COMPANY	PRODUCTS
Oerlikon Contraves, Switzerland	Naval FC Systems
Norcontrol, Norway	Radar Scan Convertor
Northrop Grumman, USA	Airport Radars
ELTA, Israel	BFSR (Battle Field Surveillance Radar)
INROS, Russia	Sonobouys
Matra Defence Equipments & Systems, France	Electric Drive system for Tanks
Sextant, France	LCD display unit
ELBIT, Israel	Stand alone communication unit
Ericsson, Sweden	Radio Relay System
Elopotro, South Africa	Laser Range Finder
Signaal, The Netherlands	Fire Control Radar
Thompson Tube Electronic, France	TWT

Source: Company

It has successfully absorbed new technologies from its JV partners...

✎ **Technology absorption:** Most of the contracts entail transfer of technology. Due to its strong R&D and manufacturing skills, BEL has been successful in absorbing technologies from the JV partner. Thus during the product lifecycle, the company is able to curtail costs by as much as 60% and pass on the savings to the customer. Also, the primary reason for BEL's endurance during the US sanctions was its strong R&D skills.

✎ **Product upgradation / new product launches:** Access to latest technologies enables BEL to remain contemporary. The company also works closely with Defense Research and Development Organization (DRDO) which is the central agency for coordinating India's defense research and development activities to productionize the research efforts.

...and its access to latest technologies keeps it contemporary

BEL has successfully developed/upgraded products through indigenous R&D efforts. Around 73% of the products sold by the company during FY06 were developed in-house (compared to 60% in FY05). BEL's own R&D set-up has a strong base of more than 1,200 engineers – the highest by any engineering company in India. Each of its nine manufacturing units has its own R&D division. In addition, the company has two Central Research Laboratories, which work on futuristic technologies. Annually, BEL spends nearly 3.6% of its turnover on R&D, which is written off in the P/L account as revenue expenditure.

New product launches in FY06

During FY06, more than 15 new products / systems such as Combat Net Radio for the Indian Army, an ATM based Integrated Ship-borne Data Network for the Navy, Surveillance Radar Element for the Air Force and EDUSAT equipment for ISRO have been rolled out. Some of the new product launches by BEL in FY06 include:

✎ **Safari Mk.II:** A broadband jamming device for effective muting of hostile receivers over wide frequency range. An order worth Rs1,750m has been received for the supply of this equipment.

- ✍ **Radar Warning Receiver:** The company has productionised an upgraded version of the Radar Warning Receiver (RWR), which was designed and developed by DARE, a DRDO laboratory. These RWRs have higher detection range and faster data processing speed, thereby enhancing the threat handling capability. They are capable of intercepting and identifying enemy radars which may be airborne, ground based or guiding missiles. The induction of these systems commenced in FY06 and the supply will continue over the next few years.
- ✍ **CDMA Encryptor:** A new CDMA Encryptor has been developed by BEL to provide end-to-end secrecy in CDMA mobile network using a single digital signal processing chip. The size of the Encryptor has been miniaturized to make it a hand-held, add-on unit to a mobile handset. This unit can provide secrecy in both CDMA and GSM mobile networks.
- ✍ **SHAKTI:** 'SHAKTI' is an Artillery Combat Command and Control System designed and developed by BEL in association with CAIR and ARDE, DRDO laboratories, to automate all the artillery functions. This software intense system is an important component of network-centric warfare, improving combat effectiveness manyfold. This system, which has been supplied to the Indian Army, has been fully evaluated and is likely to be recommended for induction, which will result in good orders over the next few years.
- ✍ **Uncooled Thermal Imager:** BEL is already manufacturing Cooled Thermal Imagers and Image Intensifier Tube based Night Vision Devices for surveillance during the night and in bad visibility conditions like dust, fog and rain during the day. The company has now developed an Uncooled Thermal Imager which fills the gap both in terms of performance and cost between the high-end, expensive Cooled Thermal Imager and the conventional Image Intensifier Tube based Night Vision Devices. This version, being highly cost-effective and more affordable, can address new application areas and market segments. It has also been demonstrated to the Maharashtra and Andhra Pradesh Police.
- ✍ **Eye Safe Laser Range Finder Integrated Binoculars:** A compact lightweight Hand Held Binoculars set integrated with Laser Range Finder, for strain-free long distance viewing and ranging of targets up to a distance of 20 km over an extended period of time, has been developed by BEL to meet the specific requirements of the paramilitary forces.
- ✍ **Central Acquisition Radar:** A medium range high-resolution 3-dimensional surveillance radar, the Central Acquisition Radar has been designed by LRDE, a DRDO laboratory, and is being concurrently engineered by BEL. This radar employs planar array antenna and provides simultaneous multi-beam coverage. It can handle over 150 targets in track while on scan mode. This radar is being offered for customer trial evaluation and is likely to be inducted into service during FY07.

Being a state-owned entity, BEL is best placed to service defense equipment in sensitive areas

- ✍ **Life-time spares and service support:** With technology absorption, BEL is able to provide life-time spares and service support, which are also key factors responsible for its success. Also, being a state-owned-entity under the aegis of the Ministry of Defense it is best equipped to handle servicing of equipment in sensitive areas. The cost of lifetime spares is generally factored into the initial sale price itself. Even in case BEL decides to shut a particular product line at any time, it gives intimation of the same to the customer, who then stocks up on spares. Besides, in times of conflicts like the Kargil war, BEL engineers can actually be present on the site to provide any assistance that may be required. This again acts as a factor in favor of BEL. Its global joint venture partners also prefer such arrangements, as BEL can then take care of the entire issue of spares and services.

Private competition is still some time away

Currently, 70% of India's defense requirements are met through imports, with the role of the private sector being restricted to supply of sub-blocks, with state-owned-entities and ordnance factories integrating the same. Private sector companies are now encouraged to partner in the manufacture of defense equipment and systems.

The Department of Industrial Policy & Promotion (DIPP), in consultation with Ministry of Defense, has granted 28 Letters of Intent (LoIs) so far to private players for the manufacture of slated products. These LoIs would get converted to licenses after three years of the fulfillment of stated conditions.

DIPP HAS GRANTED LOI TO FOLLOWING COMPANIES IN RELATION TO BEL PRODUCTS

Larsen & Toubro	Radars, Sonars and Electronic Warfare systems
Mahindra & Mahindra	Simulators
Tata Power	Components and sub-systems
HBL Nife Power Systems	Radars
Alpha Phazotron Radar Equipment	Repair of radar apparatus
Memory Electronics Pvt Ltd	Simulators, Radio and Satellite Communication Equipments, IT Systems
IST	Night vision devices and sensor based systems
Alpha - ITL Electro Optics	Optical instruments

Source: Ministry of Defense

We believe meaningful competition to BEL is still some time away

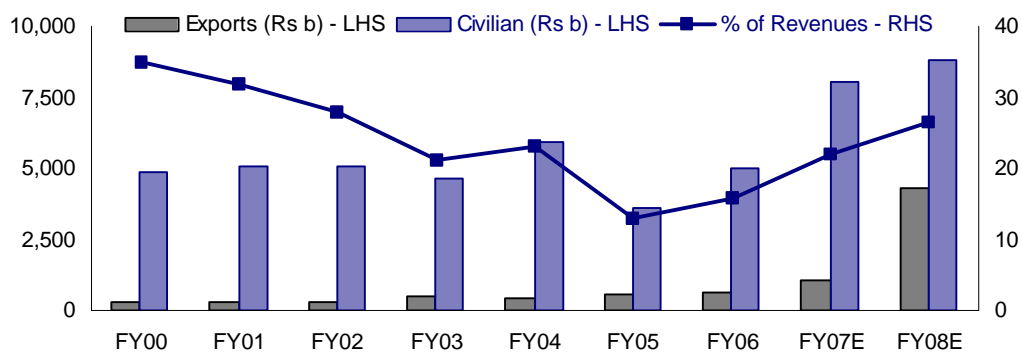
Any meaningful competition to BEL is still some time away, as qualification criteria for private companies are very stringent, and include amongst other points the track record of the company, type of product, complexity involved, expertise, etc. Given the sensitive nature of the work, the sector has high entry barriers. Further, private companies would take 2-3 years to develop the product, absorb technology, tie up raw material vendors and set up manufacturing facilities. Also, in the case of electronic warfare system, we believe that the private companies will find it difficult to penetrate the market. We expect this market to remain the exclusive domain of BEL (through technological tie-up with DRDO).

Also, BEL has certain inherent strengths, which enable the company to manage the entire delivery: technology tie-ups, technology absorption, manufacturing, product trials, life time spares and service support, etc. Other advantages with BEL are: it is the only state-owned designate in electronics, it has a large base of installed equipment over the past few decades, etc. Further, even in the past, BEL was competing with the private sector for sub-blocks, and now under the new policy, the same would just be extended to the entire systems.

Targeting exports and civilian market for growth

We believe that BEL can leverage on its traditional strengths and product portfolio of providing total communication, surveillance and imaging / sighting (including electronics) solutions for catering to the requirements of the civilian and exports market. Further, BEL has also demonstrated its ability to develop new products and applications for these segments by leveraging on its strong R&D expertise. There also exists an opportunity for BEL in contract manufacturing — MNCs could outsource its design and manufacturing facilities. Exports and civilian sales currently account for 16% of BEL's revenues and the management targets a contribution of 25% from these segments going forward. Thus, there exists a sizeable opportunity to ramp up contribution further.

TREND IN CIVILIAN AND EXPORT REVENUES (RS M) AND % OF TOTAL REVENUES



Source: Company/Motilal Oswal Securities

Focus on civilian products

BEL is leveraging its expertise to launch products in the civilian market, as well

BEL has identified diversification into various segments of the civilian market for future growth. Reorganizing the Systems activity into a separate business unit has started yielding the requisite results - for instance, winning the prestigious contract from MTNL.

BEL'S PRODUCT RANGE FOR CIVILIAN SALES

PRODUCTS	APPLICATION / CLIENTS
Vacuum Interpreters	Switchgears for Power T&D
Solar Products & Systems	Individuals, Private and Government organizations.
Satellite and Radio Communication Systems	Police, Para Military forces
Telecom Equipment / Network	Department of Telecommunication, Para-military forces, Power sector, Oil Industry, Railways
Broadcasting Equipment	AIR, Doordarshan, (National Radio & TV Broadcasters)
Electronic Voting Machine	Election Commission of India
Turnkey Systems, E-Governance Networks	Police, State governments, Public sector undertakings
Radars & Sonars	Civil Aviation, Meteorological Department, Space Department
Components	All India Radio and Doordarshan (National Radio & TV Broadcasters), Instrumentation Industry, Switching Industry, Entertainment Industry, Telephone Industry.

MTNL's contract for convergent billing (Rs5b) in March 2006

BEL won the contract for supply, integration, annual maintenance and facility management of the convergent billing system for Mahanagar Telephone Nigam Limited (MTNL) in March 2006 against stiff competition. MTNL proposes to replace the existing billing system with a new Call Data Record (CDR) based convergent billing system in Delhi and Mumbai for 3.5m customers, which is likely to be expanded to 4.5m. The project will be executed by BEL at Mumbai and Delhi, simultaneously. On implementation, the customers will receive a single composite bill for all the services rendered by MTNL such as land phone, telefax, internet, mobile phone (CDMA and GSM) and broadband (for video and internet).

To improve the civilian market share, new business areas are being addressed:

- ✍ Negotiations with the private broadcasters for providing end-to-end solutions for supply, installation, commissioning and operation of FM transmitters.
- ✍ In the telecom sector, new opportunities like expansion of GSM and CDMA networks are being explored through consortium approach with other OEMs.
- ✍ BEL has developed an Asynchronous Digital Subscriber Line (ADSL 2+) Modem to deliver broadband services on landlines by service providers such as BSNL and MTNL. This product is ready for commercial exploitation and has good market potential. The company has also set up the manufacturing facilities for this product.

Some notable civilian projects being implemented by BEL include:

- ✍ Multi-purpose **National Identity Card Project**, which involves integration of citizen data, including their biometric data, spread over different locations in 13 states.
- ✍ The scope of the **EDUSAT** program (from Indian Space Research Organization) being implemented by BEL has been expanded to 16 Hubs, 1,200 VSAT terminals at remote locations and 3,000 Receive Only Terminals. This network can be configured either for tele-education or tele-medicine or e-governance or a combination of such services. The program has already been implemented in Karnataka, Madhya Pradesh, Rajasthan, Haryana, and is under implementation in West Bengal and Bihar. As a part of this program, BEL has set up a network with the hub at Coimbatore and 20 VSATs at reputed engineering colleges like IITs, NITs, etc.
- ✍ BEL has supplied a large quantity of **Solar House Lighting Systems** and Solar Street Lighting Systems to remote and inaccessible villages. The company has so far supplied a total of 22,000 home lighting systems. It has also supplied 10kW Solar Power Plants to villages in Rajasthan, which are capable of providing electricity to about 50 homes in each village.

Its exports are also gaining traction...

Exports / outsourcing also gaining traction

BEL achieved exports of US\$13.6m during FY06, an increase of 9% against US\$12.5m in FY05. Precision electro-mechanical sub-systems / parts to General Electric Medical Systems (GEMS) and 'build to print' contract manufacture of satellite radios for the US market formed a major portion of exports. During FY07, BEL has an export target of US\$24m, 77% higher than in FY06.

Key exports (during FY06)

- ✂ Electronic components were exported to the US, UK, Singapore & Hong Kong
- ✂ Communication equipment was exported to Suriname and Botswana
- ✂ Satellite communication network equipment to Nigeria
- ✂ Radar sub-systems and parts to Indonesia, and
- ✂ Night vision devices and laser range finders to surinam and Israel

BEL'S EXPORTS: PRODUCT AND GEOGRAPHY RANGE

PRODUCTS AND SERVICES	COUNTRIES
Defence Communication	Algeria, Botswana, Brazil, France, Germany, Malaysia, Mauritius, Russia, Sweden, Switzerland, UK
Civilian Communication	Brazil, Italy, Kenya, Malaysia, Nepal, Singapore, Sweden, Switzerland, UK, Vietnam
Semiconductor Devices	Austria, Australia, China, Finland, France, Hong Kong, Malaysia, Netherlands, Philippines, Germany, South Korea, Singapore, Spain, Taiwan, Turkey, UAE, UK, USA
Electron Tubes, Magnetron, Transmitting Tubes, TV Picture Tubes and parts	Algeria, Armenia, Bangladesh, Brazil, Egypt, France, Greece, Hong Kong, Italy, Nepal, UK, USA, Zambia
Opto Electronic Products and parts	Australia, Egypt, France, Germany, Israel, Malaysia, Netherlands, New Zealand, Saudi Arabia, Singapore, UAE, UK, USA
Sound & Vision Broadcast Equipments	Vietnam, Brazil, Middle East
Radar and Sub-systems	Switzerland, Ukraine
Contract Manufacturing	USA, Australia, Japan, Brazil, Canada.
Batteries, Energy Saver and other products	Australia, Bahrain, Kuwait, Mauritius, Malawi, Nepal, Oman, Philippines, Saudi Arabia, UAE, USA
Turnkey Systems	Nepal, Kenya

Opportunity to leverage existing product range and expertise

BEL can leverage existing strengths to foray aggressively into the export market. The company has executed several projects across different geographies:

- ✂ Set up the entire TV broadcast network of Nepal
- ✂ Implemented countrywide police communication network of India
- ✂ Implemented satellite communication network for state of Andhra Pradesh to link the state capital, districts and blocks
- ✂ Total communication systems in African countries and Mauritius
- ✂ Implemented tele-medicine system for 4 government hospitals in South India
- ✂ Low cost supply base for MNCs for telecom equipment like multiplexers, switching systems, cross-connect equipment, etc

Opportunities in contract manufacturing / outsourcing

During FY06, BEL has set up a new mass manufacturing facility to assemble electronic circuit boards (ECBs) using surface mounted devices (SMDs). With this infrastructure firmly in place, the company is now geared to address the contract manufacturing business segment, specially for exports. Further, this manufacturing facility can also provide support to the company's ongoing initiatives like precision electro-mechanical sub-systems / parts

to General Electric Medical Systems and satellite radios for the US market. Thus, we strongly believe that there exists an opportunity for BEL to outsource its design and manufacturing facilities to MNCs.

...and it is aggressively pursuing outsourcing contracts for defense equipment

BEL is also aggressively pursuing outsourcing contracts for defense equipment. The company's strong R&D capability, manufacturing expertise and ability to cut costs by 60-65% post indigenization make it a strong contestant for outsourcing, as the supply agreements for the Indian market incorporate a technology transfer agreement. As we understand, the company is already negotiating with various technical collaborators. India's growing proximity to Israel has given BEL an opportunity to establish relations with Israeli entities, whereby it would export components like hand held thermal imagers. Also, the company is working to manufacture land navigation systems for France.

Offsets: could provide a new direction to exports

Recent policy changes are likely to augur well for BEL. Indian government took a decision in FY05 that 30% of the value of foreign defence contracts over Rs3b should be offset by purchases, investments and transfer of technology in India. This is intended to pull foreign defense contractors into joint ventures. We believe that BEL would be one of the largest beneficiaries of this policy change.

Offsets would entail that the exports of BEL, which were largely to third world countries, would now be targeted also towards the developed countries. However, the exact size or the nature of the opportunity from offsets for BEL remains uncertain at this point.

Strong operating dynamics

A cursory look at the financials of the BEL would highlight the strong operating dynamics of the business: the company operates in a non-cyclical, non-capital intensive, near monopoly, cash cow business; with strong entry barriers. It enjoys high margins and high return on equity.

Guidance of 19% compounded revenue growth till FY12

The management has guided Rs100b revenues by FY12 – a CAGR of 19%

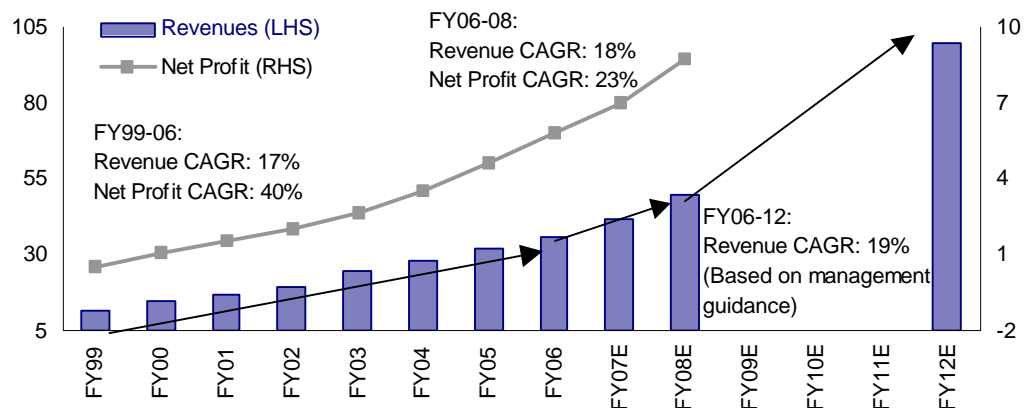
Since FY99, BEL has delivered 17% compounded revenue growth and 40% compounded earnings growth, driven by rising Indian defense expenditure and margin expansion, due to operating leverage. Going forward, the management has guided for 18% revenue growth in FY07 (to Rs42b, v/s Rs35.4b in FY06) and 19% revenue growth in FY08 (to Rs50b). Further, the management has also provided a guidance of Rs100b revenues by FY12, implying a compounded revenue growth of 19%.

Extract from BEL's Press Release (April 2006)

Over the years, the Company has emerged as a leader in the Indian professional electronics business arena. While the Company forte continues to be defence business, many initiatives have been put in place to expand into the civilian business areas.

The Company aims to achieve a turnover of Rs50,000m by FY08 and is gearing up to achieve a turnover of Rs100,000m by the year FY12 by leveraging the many opportunities like offsets and local manufacturing content. Through the many business processes which have been set in motion in the organization, the Company is confident of achieving these goals.

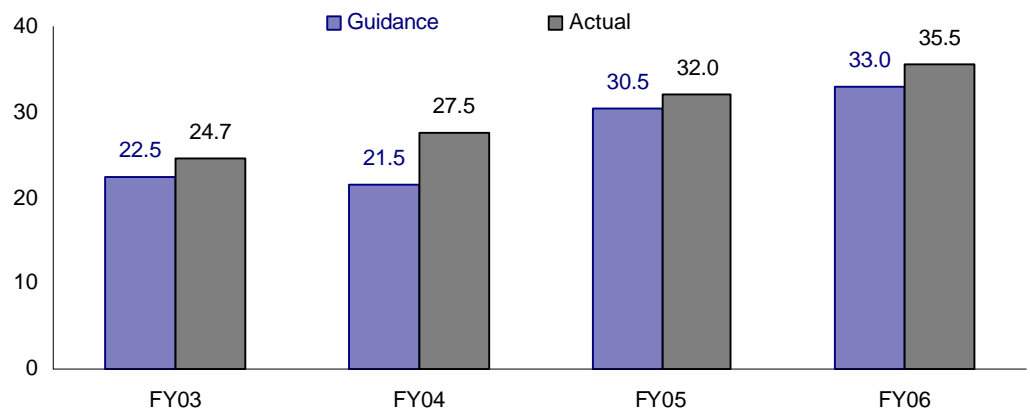
TREND IN REVENUES AND NET PROFIT (RS B)



Source: Company/Motilal Oswal Securities

We have based our FY07 and FY08 sales forecast for BEL on the management's guidance of Rs42b and Rs50b, respectively. This estimate factors in continued momentum in defense business and increased traction in civilian and exports business. BEL has a consistent track record of exceeding the annual target stipulated in the memorandum of understanding (MoU) with the government. For instance, BEL has exceeded its MoU targets by 10%, 28%, 5% and 7% for FY03, FY04, FY05 and FY06, respectively. This consistency provides us the confidence in assuming similar numbers.

BEL'S REVENUE TRACK RECORD: GUIDANCE V/S ACTUAL (RS B)



Source: Company

REVENUE GROWTH DRIVEN BY STRONG ORDER BOOK (RS B)

	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07E	FY08E
Order Intake	22,000	20,000	30,000	53,000	21,100	22,600	39,208	43,129	47,442
Order Backlog	27,110	29,950	41,313	69,400	66,500	60,100	66,000	69,661	69,712
Order Executed	14,510	17,160	18,637	23,000	24,000	29,000	33,308	39,468	47,391
Order Backlog / Revenues	1.9	1.7	2.2	3.0	2.8	2.1	2.0	1.8	1.5

Source: Company/Motilal Oswal Securities

We note that the order backlog / revenue for BEL has been declining, primarily as a result of the change in revenue composition towards civilian and export business, while entail a shorter execution period. The share of these business segments is likely to increase to 27% in FY08, v/s 13% in FY05. Order intake in FY06 at Rs39b is up 73% YoY.

REVENUE GROWTH BEING DRIVEN BY CIVILIAN AND EXPORT SEGMENTS (RS B)

	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07E	FY08E
Defence	9,593	11,533	13,810	19,237	21,069	27,685	29,697	32,388	36,271
Exports	295	314	307	481	401	543	611	1,080	4,320
Other Civilian	4,870	5,104	5,064	4,632	5,893	3,594	5,000	8,000	8,800
Total Sales	14,759	16,951	19,181	24,350	27,362	31,822	35,308	41,468	49,391

Source: Company/Motilal Oswal Securities

Margin expansion driven by operating leverage

During FY99-FY06, BEL has witnessed a significant increase in its EBITDA margins to 24.6% from 11.9%, driven largely by operating leverage (compounded revenue growth of 17%). Further, the increase in margins happened despite increase in material expenses from 47.5% of revenues in FY99 to 55.7% of revenues in FY06.

We expect EBITDA margins to remain stable

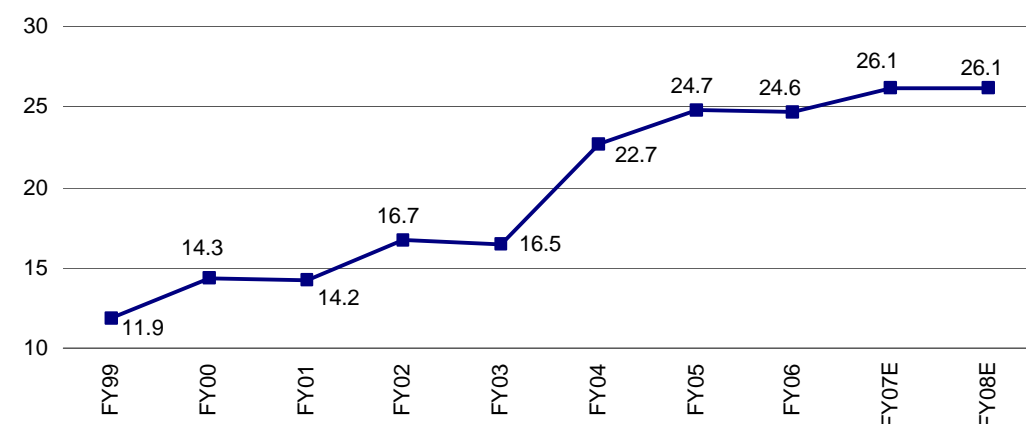
Going forward, we believe that the company will continue to enjoy operating leverage, driven by 19% revenue CAGR till FY12. Higher material costs but stable fixed costs resulting in operating leverage will lead to steady EBITDA margins.

BEL'S COST STRUCTURE (AS % OF REVENUES)

	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07E	FY08E
Materials	47.5	48.1	49.8	57.1	51.9	53.2	55.7	56.1	56.5
Staff Cost	22.7	22.9	19.2	14.9	15.9	13.8	12.0	10.8	10.9
Other Exp	10.8	10.2	10.3	7.4	5.1	4.6	4.1	3.7	3.4
R&D	4.7	4.6	4.0	4.0	4.4	3.6	3.6	3.3	3.1
Total	85.7	85.8	83.3	83.5	77.3	75.3	75.4	73.9	73.9

Source: Company/Motilal Oswal Securities

TREND IN OPERATING MARGINS (%)



Source: Company/Motilal Oswal Securities

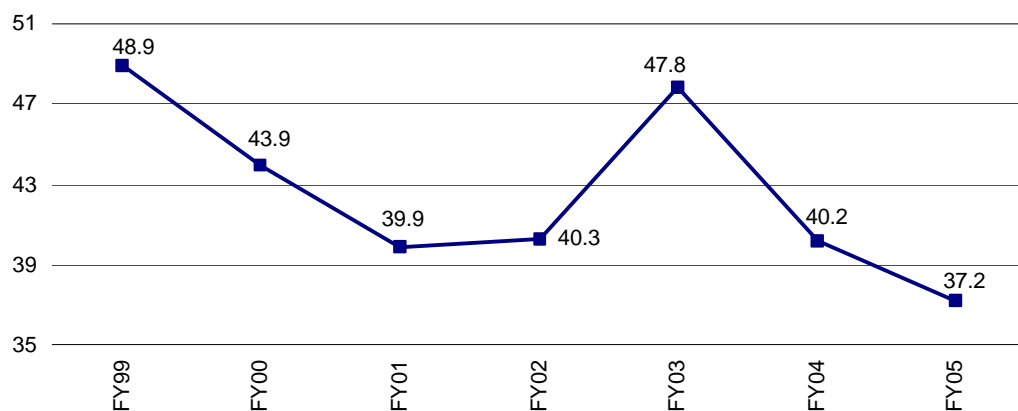
We have factored in possibility of continued increase in material costs

We believe that like in the past, material cost (as a percentage of revenues) for BEL could increase, going forward, driven by the following factors:

- ✍ Hard bargaining by the Ministry of Defense
- ✍ Increasing proportion of sales from civilian and export segments, which have a lower margin profile than defense

However, we believe that reducing import content and increased exports will enable the company to mitigate the impact of rupee depreciation, which had been impacting margins, as imports accounted for 37% of FY05 revenues. Further, rupee appreciation, if any would be a positive, which we do not factor into our estimates.

TREND IN IMPORTS (AS PERCENTAGE OF REVENUES)



Source: Company/Motilal Oswal Securities

Business continues to be a cash cow

BEL receives 15% of the order value as advance (v/s 20% earlier till FY03), on receipt of the order, which results in lower working capital requirements and capital employed. However, the pattern of the customer advance has been very erratic in the past, and thus, it is difficult to draw any firm trends.

TREND IN CUSTOMER ADVANCES (RS B)

	FY02	FY03	FY04	FY05
Customer Advance (Rs b)	14.2	14.8	20.8	16.3
As % of Revenues	103.0	77.0	99.0	59.0
As % of Orders Received	47.4	28.0	98.4	72.1

Source: Company

Valuations attractive; Buy

BEL operates in a non-cyclical, non-capital intensive, near monopoly, cash cow business; with strong entry barriers. It enjoys high margins and high return on equity. Since FY99, BEL has delivered 17% compounded revenue growth and 40% compounded earnings growth. Going forward, the management has guided for 19% revenue growth till FY12.

Significant discount to engineering companies is unwarranted

BEL trades at 12.8x FY07E and 10.4x FY08E (a 21% EPS CAGR). We expect EPS of Rs86 in FY07 and Rs106 in FY08 (a 21% EPS CAGR).

BEL'S VALUATIONS COMPARED TO ENGINEERING COMPANIES

	CMP (RS)	EPS (RS)			P/E (X)			EV/EBITDA (X)			ROE (%)		
		FY06	FY07E	FY08E	FY06	FY07E	FY08E	FY06	FY07E	FY08E	FY06	FY07E	FY08E
ABB	2,516	51.6	68.9	92.0	48.8	36.5	27.4	31.5	23.6	16.9	26.8	28.4	29.7
Alstom Projects	270	7.2	11.0	15.5	37.6	24.5	17.3	36.1	21.0	15.6	16.2	22.6	28.1
BEL	1,096	72.6	85.9	105.6	15.1	12.8	10.4	8.0	5.9	4.4	21.8	20.1	19.4
BHEL	1,973	67.1	90.9	118.5	29.4	21.7	16.6	16.4	12.3	9.1	24.5	26.6	27.4
Crompton Greaves	983	44.3	50.6	59.7	22.2	19.4	16.5	23.0	16.4	14.4	39.8	34.3	30.9
Cummins India	190	9.8	12.0	15.0	19.3	15.8	12.7	12.6	10.1	7.9	24.1	26.1	27.9
Larsen & Toubro	2,269	71.3	106.9	132.4	31.8	21.2	17.1	24.3	17.5	14.6	22.0	25.9	26.5
Siemens	4,856	131.8	167.4	219.0	36.8	29.0	22.2	24.0	18.2	14.1	45.3	42.8	41.7
Thermax	290	11.1	13.5	17.3	26.1	21.5	16.8	21.5	18.6	14.2	28.7	28.9	32.8

Source: Company/Motilal Oswal Securities

*Buy with a target price of
Rs1,480 – a 35% upside*

BEL is the most attractive stock in our universe, trading at a discount of 40%-50% versus peers. We believe that gradually the valuation gap will narrow, as the market gains confidence on the company's ability to demonstrate steady growth, which will be driven by steady defense business and high growth in the civilian and export segments. We arrive at a price target of Rs1,480/share based on 14x FY08 PER.

Risks

The key investment risks in BEL pertain to the inadequate disclosures, lumpiness in financial numbers and no consistent trend. Also, entry of private competition in defense could reduce the size of opportunity for the company. EBITDA margins could be under pressure as the defense department presses for better terms and increasing share of civilian and exports in the revenue pie.

Quarterly numbers are volatile, with no consistent trend

Due to the nature of the defense orders, BEL has had a history of reporting volatile quarterly earnings, which results in lumpiness in reported numbers. For instance, during FY06, BEL reported revenue growth of 11%, which is split as 1Q: -22%, 2Q: 2%, 3Q: 2% and 4Q: 39%. Thus, in the case of BEL, performance cannot be judged on a quarterly basis.

QUARTERLY PERFORMANCE

(RS MILLION)

Y/E MARCH	FY05				FY06				FY05	FY06
	1Q	2Q	3Q	4Q	1Q	2Q	3Q	4Q		
Sales	6,171	8,108	6,622	11,334	4,791	8,288	6,772	15,757	31,969	35,608
<i>Change (%)</i>	10.0	42.8	13.0	5.3	-22.4	2.2	2.3	39.0	14.5	11.4
EBITDA	786	1,879	1,248	2,715	751	2,053	1,447	4,174	6,958	8,424
<i>Change (%)</i>	2.3	90.4	-0.7	52.1	-4.5	9.2	15.9	53.7	38.1	21.1
<i>As of % Sales</i>	12.7	23.2	18.8	24.0	15.7	24.8	21.4	26.5	21.8	23.7
Depreciation	159	172	168	211	193	176	181	228	715	778
Interest	9	11	2	57	4	6	13	250	116	273
Other Income	222	248	280	281	298	240	217	353	1,036	1,108
Exceptional Items (reported)	0	-311	0	7	0	0	0	0	-304	0
PBT	841	1,633	1,358	2,735	852	2,111	1,470	4,049	6,860	8,481
Tax	260	528	535	946	286	644	499	1,239	2,396	2,669
<i>Effective Tax Rate (%)</i>	30.9	32.3	39.4	34.6	33.6	30.5	34.0	30.6	34.9	31.5
Reported PAT	581	1,105	823	1,789	566	1,467	970	2,809	4,463	5,812
<i>Change (%)</i>	8.6	55.1	17.6	113.2	-2.6	32.7	17.9	57.0	47.4	30.2
Adj PAT	581	1,416	823	1,782	566	1,467	970	2,809	4,767	5,812

Quality of disclosures continue to be inadequate

BEL is a state-owned-entity, under the aegis of the Ministry of Defense. Given the sensitive nature of defense transactions, disclosures are inadequate. Also, in terms of guidance, while the management has provided a revenue target of Rs42b in FY07, Rs50b in FY08 and Rs100b in FY12; it has not discussed and elaborated on the strategy to achieve the same. We do not have a clear understanding of the products or new launches that could drive this growth.

Stagnant order book could raise some concerns

BEL's order book since FY03 has been largely stagnant, with FY06 order book to revenue at just 2x. Further, the order book has also witnessed a cyclical depletion from Rs69.4b in FY03 to Rs66b in FY06. In order to negotiate better pricing terms, the Ministry of Defense has now moved to bulk ordering, which results in lumpiness in order intakes.

REVENUE GROWTH DRIVEN BY STRONG ORDER BOOK (RS B)

	FY00	FY01	FY02	FY03	FY04	FY05	FY06	FY07E	FY08E
Order Intake	22,000	20,000	30,000	53,000	21,100	22,600	39,208	43,129	47,442
Order Backlog	27,110	29,950	41,313	69,400	66,500	60,100	66,000	69,661	69,712
Order Executed	14,510	17,160	18,637	23,000	24,000	29,000	33,308	39,468	47,391
Order Backlog / Revenues	1.9	1.7	2.2	3.0	2.8	2.1	2.0	1.8	1.5

Source: Company/Motilal Oswal Securities

We note that the order backlog / revenue for BEL has been declining, primarily a result of the change in revenue composition towards civilian and export business. The share of these business segments is expected to increase to 27% in FY08, v/s 13% in FY05. Order intake in FY06 at Rs39b is up 73% YoY.

Increased competition from private sector

Currently, 70% of India's defense requirements are met through imports. Private sector companies are now encouraged to partner in the manufacture of defense equipment and systems.

The Department of Industrial Policy & Promotion (DIPP) in consultation with the Ministry of Defense has granted 28 Letter of Intents (LoIs) so far to private players for the manufacture of slated products. These LoIs could be converted to be licenses after three years post fulfillment of stated conditions.

Any meaningful competition to BEL is still some time away, as qualification criteria for private companies are very stringent, and include amongst other points the track record of the company, type of product, complexity involved, expertise, etc. Given the sensitive nature of the work, the sector has high entry barriers. Further, private companies would take a 2-3 years to develop the product, absorb technology, tie up raw material vendors and set up manufacturing facilities. Also, in the case of electronic warfare system, we believe that the private companies will find it difficult to penetrate the market. We expect this market to remain the exclusive domain of BEL (through technological tie-up with DRDO).

EBITDA margins could witness a structural decline

There is a possibility of a structural decline in EBITDA margins going forward, driven by the following factors:

- ✍ **Hard bargaining by the Ministry of Defense:** Pricing in the case of defense orders is on negotiated basis, and not on cost plus basis. Hard bargaining by the Ministry of Defense could reduce the margins from defense orders.
- ✍ **Increasing share of civilian sales and exports to overall revenue:** The share of civilian and export businesses to overall revenues are expected to increase to 27% in FY08, v/s 13% in FY05. These segments enjoy a lower margin profile as compared to defense segment, due to the greater intensity of competitive pressures.

We believe that operating leverage driven by 19% revenue CAGR till FY12, reducing import content, etc. will enable the company to mitigate the impact.

INCOME STATEMENT		(RS MILLION)				
Y/E MARCH	2004	2005	2006	2007E	2008E	
Net Sales	27,502	31,969	35,459	41,623	49,551	
<i>Change (%)</i>	33.6	16.2	10.9	17.4	19.0	
Manufacturing Expenses	15,674	18,488	21,204	24,871	29,661	
Staff Cost	4,383	4,421	4,246	4,500	5,400	
Office and Site Establishment Exps	2,244	2,101	1,436	2,174	2,336	
EBITDA	5,202	6,958	8,574	10,078	12,154	
<i>% of Net Sales</i>	18.9	21.8	24.2	24.2	24.5	
Depreciation	623	715	778	855	933	
Interest	74	116	273	153	150	
Other Income	761	1,036	957	1,262	1,632	
PBT	5,266	7,164	8,480	10,332	12,704	
Tax	1,529	2,396	2,669	3,461	4,256	
<i>Rate (%)</i>	29.0	33.5	31.5	33.5	33.5	
Reported PAT	3,736	4,767	5,811	6,871	8,448	
EO Income (Net of Expenses)	-576	-304	0	0	0	
Adjusted PAT	3,161	4,463	5,811	6,871	8,448	
<i>Change (%)</i>	21.3	41.2	30.2	18.2	23.0	

E: MOST Estimates

BALANCE SHEET		(RS MILLION)				
Y/E MARCH	2004	2005	2006	2007E	2008E	
Share Capital	800	800	800	800	800	
Reserves	11,686	15,133	19,591	24,927	31,570	
Net Worth	12,486	15,933	20,391	25,727	32,370	
Loans	329	153	153	153	147	
Deffered Tax Liability	-913	-1,170	-1,170	-1,170	-1,170	
Capital Employed	11,902	14,917	19,374	24,710	31,347	
Gross Fixed Assets	10,410	11,293	12,543	13,793	15,043	
Less: Depreciation	7,530	8,099	8,877	9,733	10,665	
Net Fixed Assets	2,880	3,193	3,665	4,060	4,377	
Capital WIP	337	474	502	552	602	
Investments	123	123	200	200	220	
Curr. Assets	36,690	38,219	41,899	51,571	63,784	
Inventory	10,153	10,650	11,487	13,076	15,575	
Debtors	6,675	6,991	6,829	8,025	9,558	
Cash & Bank Balance	14,345	13,159	17,174	22,937	29,680	
Loans & Advances	5,517	7,420	6,409	7,532	8,971	
Other Current Assets	0	0	0	0	0	
Current Liab. & Prov.	28,195	27,130	26,929	31,709	37,673	
Liabilities	24,172	20,116	21,844	25,671	30,601	
Provisions	4,023	7,013	5,085	6,038	7,072	
Net Current Assets	8,495	11,090	14,970	19,862	26,111	
Misc. Expenses	67	37	37	37	37	
Application of Funds	11,902	14,917	19,374	24,710	31,347	

E: MOSt Estimates

RATIOS

Y/E MARCH	2004	2005	2006	2007E	2008E
Basic (Rs)					
Adjusted EPS	39.5	55.8	72.6	85.9	105.6
<i>Growth (%)</i>	21.3	41.2	30.2	18.2	23.0
Cash EPS	60.2	76.6	84.4	106.6	127.3
Book Value	155.2	198.7	254.4	321.1	404.2
DPS	10.0	11.2	15.0	17.0	20.0
Payout (incl. Div. Tax.)	25.3	20.1	20.6	19.8	18.9
Valuation (x)					
P/E (standalone)		19.6	15.1	12.8	10.4
Cash P/E		14.3	13.0	10.3	8.6
EV/EBITDA		9.3	8.0	5.9	4.4
EV/Sales		2.3	2.0	1.5	1.1
Price/Book Value		5.5	4.3	3.4	2.7
Dividend Yield (%)		1.0	1.4	1.6	1.8
Profitability Ratios (%)					
RoE	21.6	22.7	21.8	20.1	19.4
RoCE	32.6	35.3	35.0	31.6	30.5
Turnover Ratios					
Debtors (Days)	89	80	70	70	70
Inventory (Days)	132	121	118	114	114
Asset Turnover (x)	9.3	9.3	9.1	9.5	10.3
Leverage Ratio					
Debt/Equity (x)	0.0	0.0	0.0	0.0	0.0

E: MOST Estimates

CASH FLOW STATEMENT		(RS MILLION)				
Y/E MARCH	2004	2005	2006	2007E	2008E	
PBT before Extraordinary Items	5,266	7,164	8,480	10,332	12,704	
Add: Depreciation	623	715	778	855	933	
Interest	74	116	273	153	150	
Less: Direct Taxes Paid	1,529	2,396	2,669	3,461	4,256	
(Inc)/Dec in WC	6,119	-3,781	135	871	493	
CF from Operations	10,553	1,817	6,998	8,750	10,024	
Extra-ordinary Income	-576	-304	0	0	0	
CF from Operations after EOI	9,977	1,513	6,998	8,750	10,024	
(Inc)/Dec in FA	-1,168	-1,165	-1,278	-1,300	-1,300	
(Pur)/Sale of Investments	0	0	-77	0	-20	
CF from Investments	-1,168	-1,165	-1,355	-1,300	-1,320	
(Inc)/Dec in Networth	-183	-221	0	0	0	
(Inc)/Dec in Debt	-78	-176	0	0	-6	
Less: Interest Paid	74	116	273	153	150	
Dividend Paid	903	1,021	1,354	1,534	1,805	
CF from Fin. Activity	-1,238	-1,534	-1,627	-1,687	-1,961	
Inc/Dec of Cash	7,571	-1,186	4,016	5,763	6,743	
Add: Beginning Balance	6,775	14,345	13,159	17,174	22,937	
Closing Balance	14,346	13,159	17,174	22,937	29,680	

E: MOSt Estimates

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1. Analyst ownership of the stock
2. Group/Directors ownership of the stock
3. Broking relationship with company covered

Bharat Electronics

No
Yes
No

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