

March 17, 2010

## Thermax Limited (THERMA)

Rs 682

### Utilizing Opportunities...

Focus on the industrial segment, strong private sector exposure and numerous technological partnerships make Thermax Ltd (Thermax) a key beneficiary of the pick-up of industrial capex in FY11E. With Thermax foraying into the utility segment following its technological partnership with Babcock & Wilcox (sub-critical and supercritical), we believe the company's cyclicality to industrial capex will reduce in addition to improving order outlook. An increase in average execution period and uptick in order ticket size provides strong sales visibility over the next one or two years driving net sales at 35% CAGR in FY10E-12E to Rs 5,315 crore. Current valuations, however, appear fair. We initiate coverage on the stock with an ADD rating.

#### Strong sales visibility: Pick up in capex cycle and foray in utility segment

With the economy gaining momentum (7.2% in FY10E and 8.5% in FY11E-12E) and with significant power shortfall in India, we expect robust demand growth for captive power plants by industrial houses. Furthermore, large order wins by Thermax in the utility segment boosts its order book position (reducing cyclicality), providing strong sales visibility through FY12E. Also, stricter environmental regulations will drive growth of the environment segment. Hence, we estimate Thermax's net sales will grow at a 35% CAGR in FY10E-12E to Rs 5,315 crore. Key risks include Thermax's limited experience in executing large utility orders and intense competition from established players (Bhel, L&T, etc.)

#### Limited scope for margin expansion

EBITDA margins are expected to expand in FY11E (14.2% vs. 13.3% in April-December 2009) due to the anticipated increase in billing rates and efficiencies associated with higher turnover. However, margin expansion will be limited by the higher share of EPC contracts in Thermax's order book (45% in Q3FY10).

#### Valuations

At the CMP of Rs 682, the stock is trading at a P/E of 21.5x FY11E (vs. 22.0x for market leader Bhel). We have valued Thermax using the DCF methodology due to the longer execution cycles associated with its future orders. Although, sales visibility is strong over the next one or two years, Thermax's limited execution experience may inhibit new order growth in the future. The current price offers limited upside. We are initiating coverage on the stock with an ADD rating.

#### Exhibit 1: Key Financials

(Rs Crore)	FY08	FY09	FY10E	FY11E	FY12E
Net Sales	3,246	3,303	2,929	4,305	5,315
EBITDA	451	453	393	610	757
Net Profit	281	318	98	373	466
PE (x)	28.6	27.9	33.5	21.5	17.2
Target PE (x)	42.7	40.5	17.9	17.6	15.7
EV/EBITDA (x)	17.7	16.9	18.8	11.5	8.7
P/BV (x)	10.9	8.3	7.5	5.7	4.4
RoNW (x)	42.7	33.8	9.7	30.2	28.8
RoCE (%)	65.3	49.6	33.9	43.4	41.5

Source: Company, ICICIdirect.com Research

## Initiating Coverage

#### Rating Matrix

Rating	:	<b>Add</b>
Target	:	Rs 705
Target Period	:	12-15 months
Potential Upside	:	3%

#### YoY Growth (%)

	FY09	FY10E	FY11E	FY12E
Total Revenue	1.8	-11.3	47.0	23.5
EBITDA	0.4	-13.2	55.0	24.1
Net Profit	13.3	-69.1	279.9	25.0

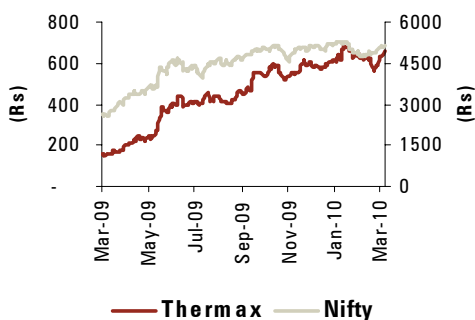
#### Stock Data

Bloomberg Code	TMX.IN
Reuters Code	THMX.BO
Face Value (Rs)	2
Promoters Holding	61.98
Market Cap (Rs cr)	8,184
52 week H/L	745/153
Sensex	17,510
Average volumes	44,530

#### Comparative return matrix (%)

Company	1m	3m	6m	12m
Thermax	9	15	40	342
BHEL	6	6	7	85
L&T	10	-7	-2	172
Crompton Grea <sup>a</sup>	2	8	38	265

#### Price movement (Stock vs. Nifty)



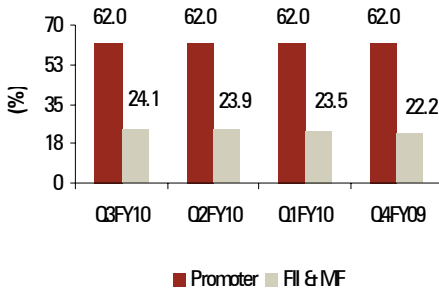
#### Analyst's name

Chirag Shah  
shah.chirag@icicisecurities.com

Shareholding pattern (Q3FY10)

Shareholder	Holding (%)
Promoter Holding	62.0
Institutional	24.1
General public	13.9

Promoter & Institutional holding trend (%)

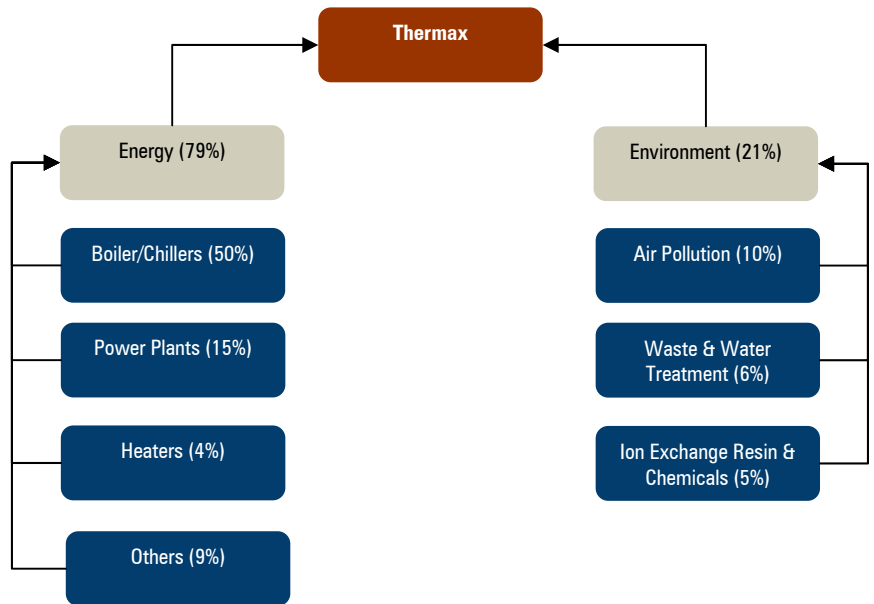


**Company Background**

Thermax, established in 1980, is one of India’s largest suppliers of industrial boilers, with a market share of 20%. The company operates in two segments: energy and environment, with the former accounting for nearly 76% of net sales in FY09. In the energy segment, Thermax manufactures boilers and heaters, absorption chillers/heat pumps and power plants. In the environment segment, the company manufactures air pollution control equipment/systems, water and waste recycle plants, ion exchange resins and performance chemicals. Although Thermax is domestic focused with nearly 80% of net sales from India, it has six international subsidiaries based in Europe, Asia and North America.

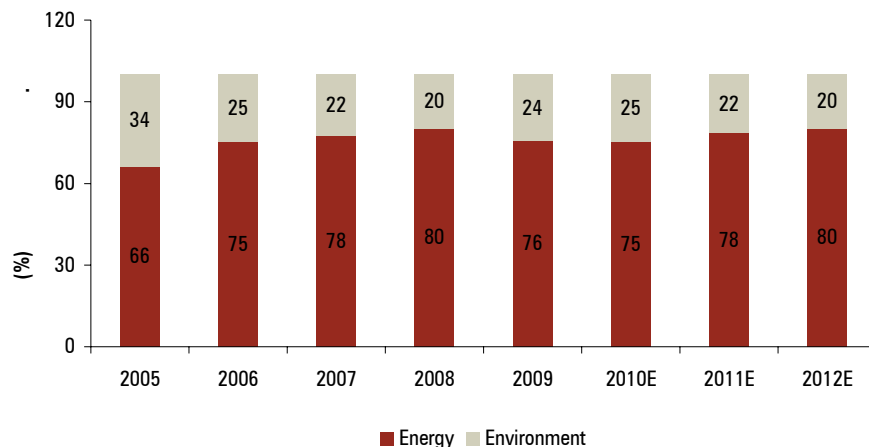
Headquartered in Pune, Thermax operates four manufacturing facilities (three in India and one in China). The company employed 4,752 personnel as on March 2009 and was listed on the stock exchange in 1995.

**Exhibit 2: Company structure (figure in bracket indicates share of net sales in FY09)**



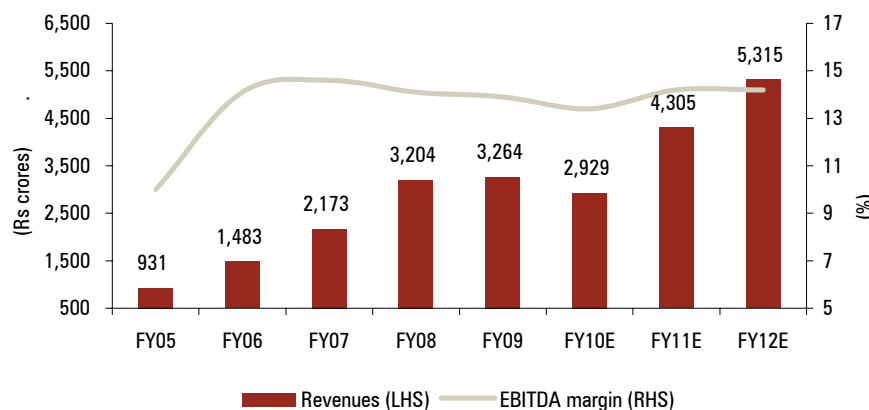
Source: Company, ICICIdirect.com Research

**Exhibit 3: Net sales mix (FY05-12E)**



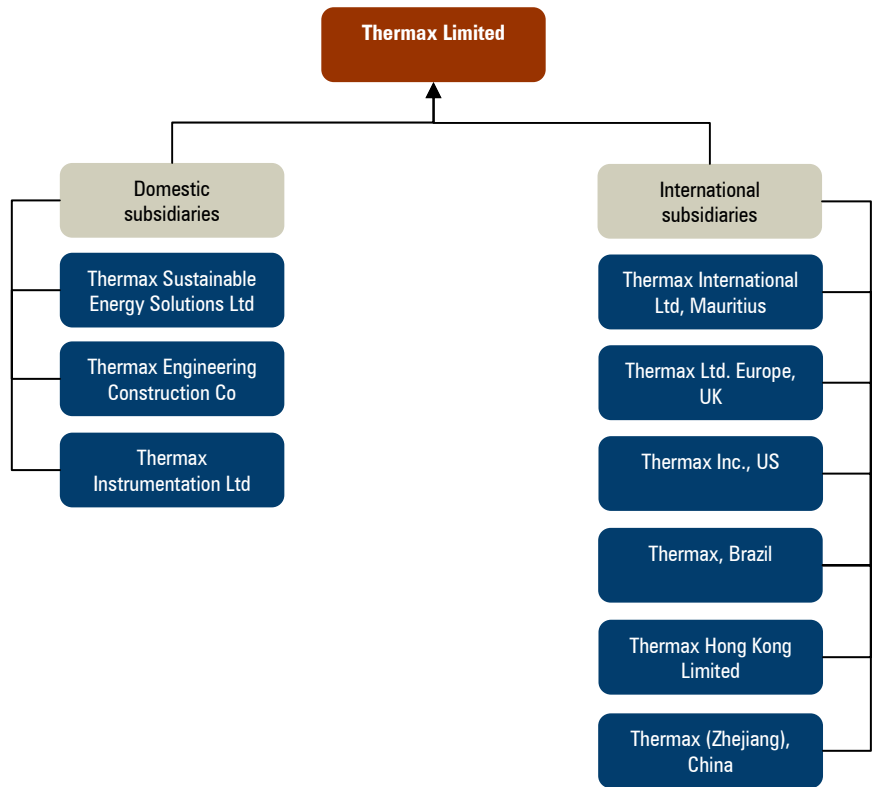
Source: Company, ICICIdirect.com Research

**Exhibit 4: Net sales and EBITDA margin (FY05-09)**



Source: Company, ICICIdirect.com Research

**Exhibit 5: Domestic and international subsidiaries**



Source: Company, ICICIdirect.com Research

### Investment Rationale

Thermax is riding thorough a transition phase where the company is transforming itself as the foray into the utility segment following its technological partnership with Babcock & Wilcox (sub-critical and supercritical), the company’s cyclicalty to industrial capex will reduce in addition to improving order outlook and revival of private sector capex. Also, stricter environmental regulations will drive growth of the environment segment. Hence, we estimate Thermax’s net sales will grow at a 35% CAGR in FY10E-12E to Rs 5,315 crore on the back of growing order book, especially, from the recent utility foray.

#### Strong sales visibility over next one or two years

Thermax enjoys a diverse client base with nearly 50% of net sales in 9MFY10 coming from the cement, ferrous metal, refinery petrochemicals and power generation sectors. In April-December 2009, the order book grew by 36% YoY to Rs 5,233 crore driven by strong order inflows (Rs 4,471 crore), led by a large order in the utility space (worth Rs 1,001 crore from Meenakshi Group). The growth comes on the back of robust growth of the order book in FY09 (+19% to Rs 2,897), fuelled by large orders in the petrochemicals and metals space.

However, due to the liquidity crunch in FY09, some orders of Thermax were delayed and cancelled, leading to the decline of net sales in 9MFY10 (down 15% YoY to Rs 1,966 crore). Consequently, we estimate that FY10E net sales will decline by 10% to Rs 2,929 crore.

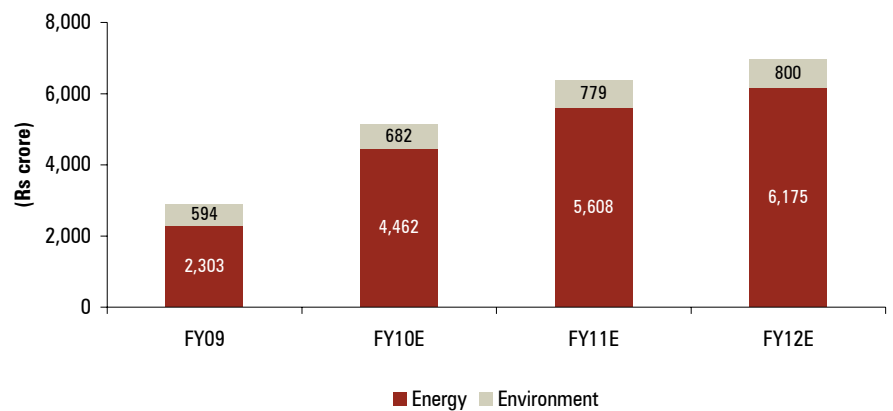
With the economy gaining momentum and companies going ahead with their capex plans, we expect robust growth of the order book in FY10E-12E (16% CAGR to Rs 5,986 crore). With an execution rate of 12-15 months, we estimate that Thermax’s net sales will grow at 35% CAGR in FY10E-12E (vs. 23% CAGR in FY07-09). Net sales growth in FY11E will be driven by the revenue recognition of large EPC orders won in FY10 (including the order for Meenakshi Group and Essar Steel).

In our view, the execution rate will lengthen in the future as the weightage of EPC orders (execution period of 16-20 months vs. 12-15 months for boilers/chillers orders) in the total order book increases.

With an execution rate of 12-15 months and solid order book size, we estimate Thermax’s net sales will grow at a 35% CAGR in FY10E-12E

The order book size is estimated to grow at 16% CAGR in FY10E-12E, driven by the pick-up of industry capex and Thermax’s entry into the utility segment

**Exhibit 6: Overall order book size (FY09-12E)**



Source: Company, ICICIdirect.com Research

Total 47% growth of revenue in FY11E driven by the execution of large projects in Thermax's order book

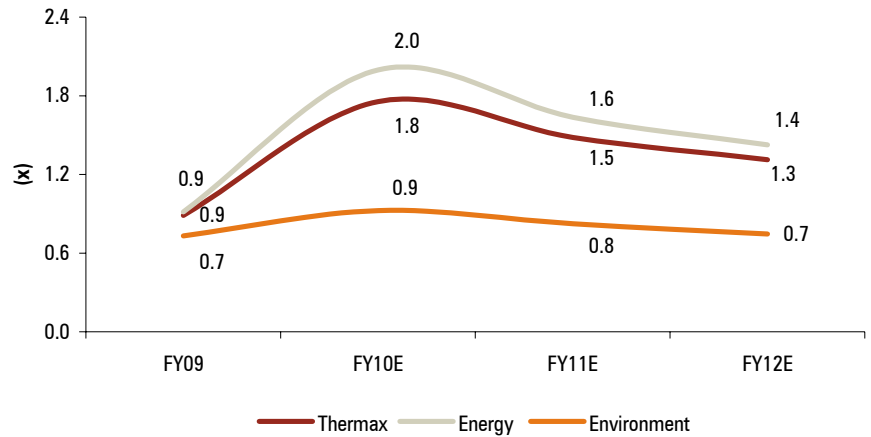
**Exhibit 7: Major projects in Thermax's order book (Q3FY10)**

Client	Order Value (Rs crore)	Major revenue recognition	Commissioning
Meenakshi Group	1001	FY11	FY12
Essar Steel	370	FY11	FY12
Brahmani Steel	280-290	On Hold	On Hold
Metal producer (Orissa)	477	FY11	FY11

Source: Company, ICICIdirect.com Research

Order book to Bill ratio for Thermax has improved significantly with foray into the utility segment.

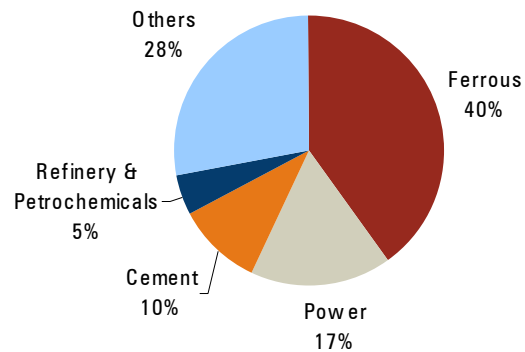
**Exhibit 8: Book to bill ratios expected to decline in FY11E-12E**



Source: Company, ICICIdirect.com Research

As of Q3FY10 EPC orders comprised 45% of the total order book of thermx

**Exhibit 9: New order composition (FY09)**



Source: Company, ICICIdirect.com Research

Significant growth potential exists in the utility boiler segment due to the power shortfall in India and the lag between actual capacity addition vis-à-vis planned targets

**Cyclicality of earnings to reduce due to entry into utility segment**

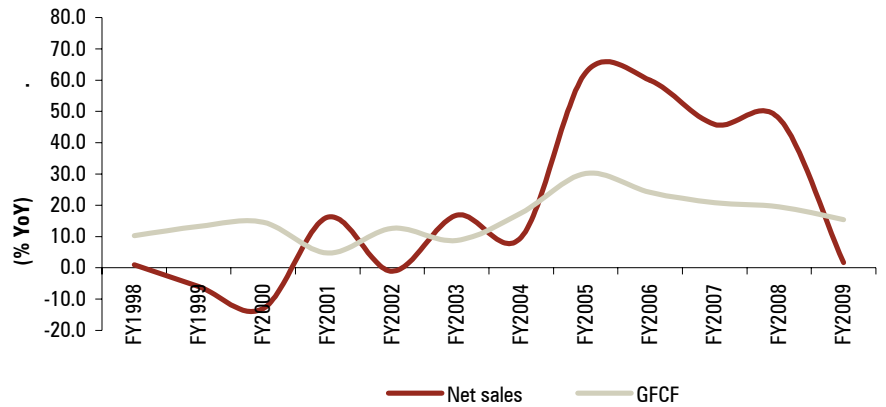
**Technology partnership with Babcock & Wilcox**

A strong correlation of 0.73 exists between growth of Thermax’s net sales and gross fixed capital formation (GFCF). With the company’s foray into the utility segment following its partnership with the US-based Babcock & Wilcox Power Generation Group (B&W) in FY08 (technology transfer to manufacture sub-critical utility boilers), we believe the company’s cyclicality to industrial capex will reduce. In our view, the utility segment presents attractive growth opportunities fuelled by the substantial power deficit in India (peak load deficit of 12% in FY09) and historical gap between the actual capacity addition by the government vis-à-vis planned targets (~50% in the Eighth to Tenth Plans). Actual capacity addition continues to lag in the first three years of the Eleventh Plan (6,740 MW added until January 2010 vs. planned targets of 14,507 MW).

As a result of the partnership with Babcock & Wilcox, Thermax won a large utility order during Q2FY10 (Rs 1,001 crore), propelling the overall order book size to Rs 5,233 crore in Q3FY10. With the government planning to add 20 GW power capacity annually till FY22 and with Thermax’s entry into the utility segment (~20% of order book), we expect the share of the utility segment in Thermax’s order book to increase providing it a more stable revenue stream in the future.

Coefficient of correlation of 0.73 between growth of Thermax’s net sales and GFCF

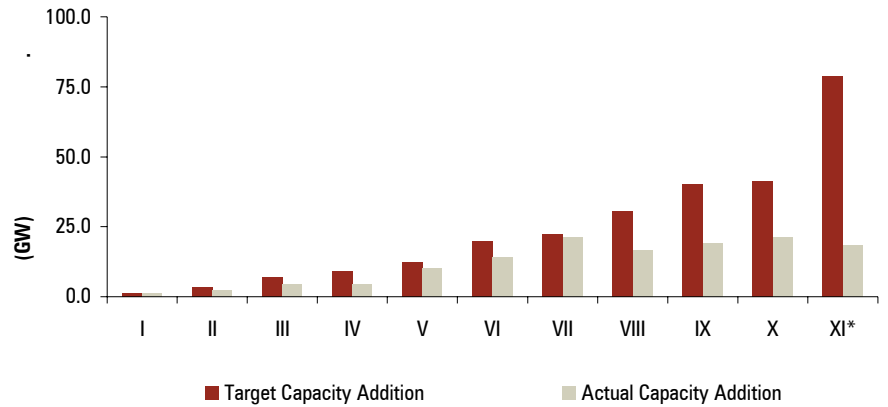
**Exhibit 10: Growth of Thermax’s net sales vs. GFCF**



Source: Company, Mospil, ICICIdirect.com Research

Actual capacity addition in the power sector has lagged plan targets contributing to a peak load factor of 13.8% in June 2009

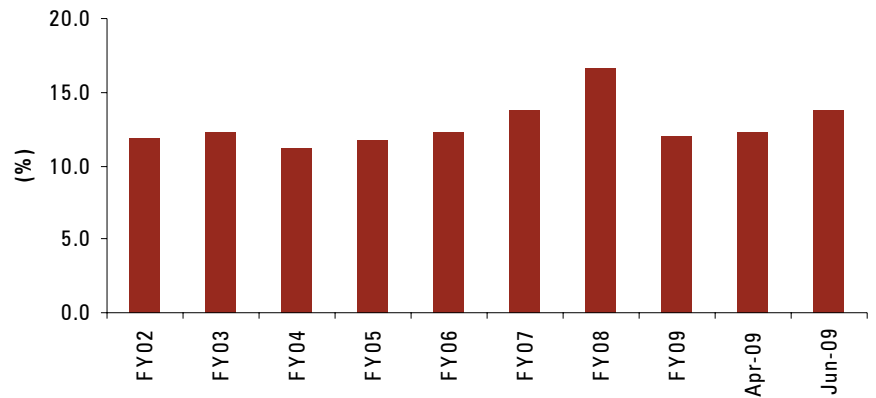
**Exhibit 11: Evolution of power capacity addition vis-à-vis planned targets**



Source: Central Electricity Authority, ICICIdirect.com Research

\*Indicates actual capacity added during the first three years of the XIth Plan

**Exhibit 12: Peak load deficit**



Source: Central Electricity Authority, ICICIdirect.com Research

Thermax has signed a technological partnership with B&W in March 2010 to enter the supercritical segment

**Migration to supercritical technology to take time**

We believe nearly 60% of the power capacity addition in the Twelfth Plan (60 MW) will be based on supercritical technology (vs. 10% in the Eleventh Plan) as a result of its higher efficiency vis-à-vis the sub-critical technology. Thermax adopted the supercritical technology in March 2010 extending its partnership with B&W. The JV between Thermax and B&W (51:49 ownership split) will manufacture supercritical boilers (660 MW and above) in addition to manufacturing 300 MW sub-critical boilers. The company will set up a new facility with an expected annual manufacturing capacity of 3,000 MW increasing its total manufacturing capacity to 4,500 MW. However, it has been late in adopting this technology compared to peers (L&T and Bhel).

Despite the preference for supercritical technology in the Twelfth Plan, we believe a majority of new utility orders anticipated to be won by Thermax during the next one or two years will be based on sub-critical technology as its clients do not have the balance sheet strength to finance large supercritical power plants. Further, the company’s success in the supercritical segment will be constrained by its limited execution capacity even in the sub-critical segment.



**Exhibit 13: Competitors partnering with foreign manufacturers to obtain supercritical technology**

Domestic manufacturer	Technology Partner	Year JV formed y when established (MW)	
L& T	Mitsubishi Heavy Industries	2007	4,000
Bharat Forge	Alstom	2008	5,000
JSW	Toshiba	2009	3,000
GB Engineering	Ansaldo	2009*	2,000

Source: Company, ICICIdirect.com Research

\*GB Engineering and Ansaldo initially entered into a JV in 2005

Solid capacity addition anticipated to be undertaken by Thermax's key industrial sectors (cement, steel and petrochemical) in FY11E, driving the company's order book

**Pick-up of industrial capex to drive industrial segment growth**

**Leadership position in boilers and chillers market**

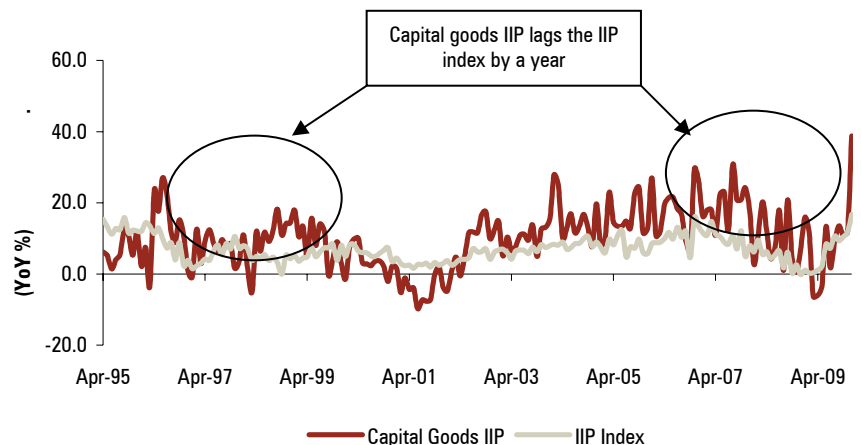
Despite the robust growth anticipated in the utility segment, we believe the industrial segment will continue to dominate Thermax's order book in FY11E-12E driven by the pick-up of industrial capex and the company's leadership position in the boilers and chillers market (20% and 85% market share, respectively). The industrial segment constituted nearly 80% of Thermax's order book in Q3FY10.

Growth in the industrial segment was hit in FY09 due to the economic slowdown and consequent lowering of lending by banks to industrial houses. However, with the economy gaining momentum (GDP grew by 7.9% in Q2FY10) driven by the robust performance of the industrial sector (IIP growth of 8.6% YoY in April-December 09) and solid GDP growth anticipated in FY11E-12E (~8.5%), we expect industrial capex in India to grow strongly over the next two years. Our analysis of the IIP data indicates capital goods IIP lags the IIP index trend by a year. Given the recent positive IIP trends, we expect robust growth of the capital goods sector over the next 12 months.

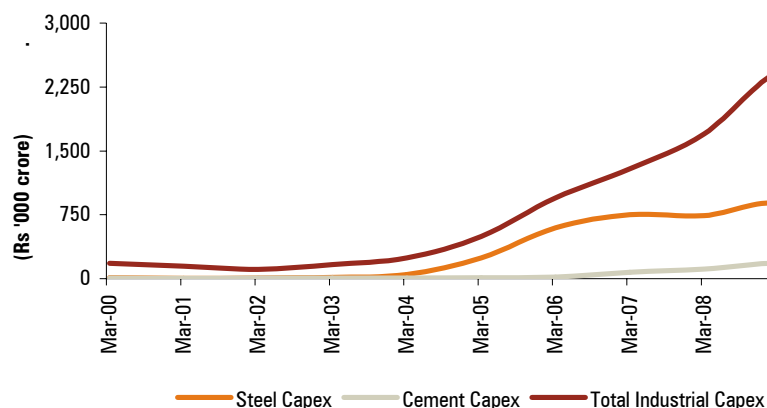
Our positive outlook is reinforced by our analysis of capex plans of major steel and cement companies in India, which are expected to add capacity to keep pace with the sustained growth of demand. Steel and cement demand in FY11E is expected to grow by 6-9% and 8-10%, respectively.

Several cement companies have finalised orders during the last few quarters, including Madras Cement (order won by Thermax) and India Cement (won by a competitor of Thermax). We expect robust order inflows from the petrochemical refinery sector due to the stability of oil prices (average of US\$53.5/bbl in 2009 according to the Energy Information Administration) and capacity expansion plans by oil companies. On the other hand, new order inflows from the steel sector are still lagging the cement and petrochemical sectors in Q3FY10. However, it is also expected to pick up in FY11E.

**Exhibit 14: Growth of capital goods IIP vs. IIP index**



Source: Mospi, ICICIdirect.com Research

**Exhibit 15: Quarterly capex trends (March 2000-December 2009)**

Source: CMIE, ICICIdirect.com Research

**Exhibit 16: Capacity expansion plans of select steel and cement companies (in million tonnes)**

Company	Installed Capacity (FY09)	Capacity Expansion - FY11E	Planned Capex (Rs crore)
ACC	26.0	4.0	1,400
Ambuja Cement	19.0	5.0	3,500
Zuari Cement	NA	2.2	NA
Jaypee Cement	NA	3.0	NA
SAIL	14.0	9*	12,254
Tata Steel	6.8	9.2*	5,700

Source: Company, ICICIdirect.com Research

\*Capacity expansion expected by 2012. \*\*Capacity expansion expected by 2014.

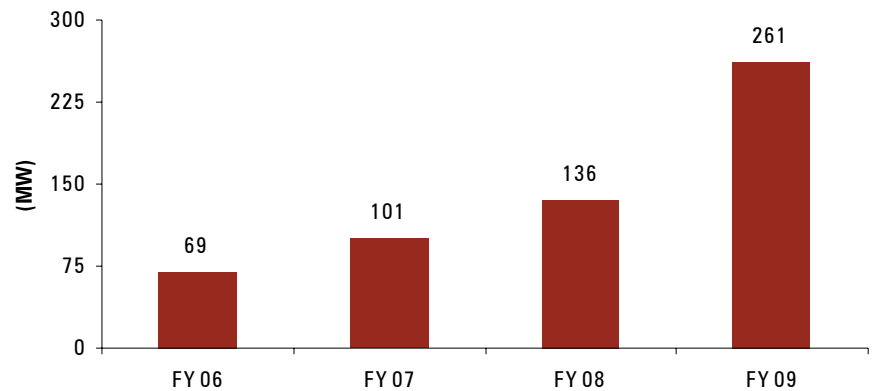
Thermax's capabilities in the CPP segment have grown rapidly with CPP commissioned growing at 56% CAGR in FY05-FY09 to 261 MW

### Strong demand outlook for captive power plants

The captive power plant (CPP) segment contributed nearly 15% of Thermax's net sales in FY09 (vs. 27% in FY08). The company has rapidly grown in the segment, with CPP commissioned increasing at 56% CAGR in FY05-FY09 to 261 MW. We believe Thermax will be one of the primary beneficiaries of the pick-up in industrial capex as it has rapidly developed its capabilities in the segment and with the current power shortfall in India.

According to the management, Thermax will secure CPP orders of nearly Rs 1,000 crore in H2FY10 in the 20-60 MW range, with the company already securing an order of Rs 500 crore in Q3FY10.

**Exhibit 17: CPP commissioned by Thermax**



Source: Company, ICICIdirect.com Research

### Economical to produce captive power

Industrial and commercial consumers cross-subsidise agricultural consumers, leading to high electricity expenses for industrial users. In our view, demand for CPP will be fuelled by the lower cost of power generated through captive plants. Based on our analysis, cost of captive power is computed at Rs 2,530/MW (vs. Rs 3,450/MW for grid power) assuming a 10 MW captive plant operating at 80% peak load factor (PLF). CPP becomes even more attractive when one considers the productivity losses incurred due to power shortages. The steel sector is heavily dependent on captive power. An estimated 80-85 MW of additional captive power is required for each MT of capacity expansion. Given that the steel sector's capacity is expected to expand by 5-6 MT in FY11E and 12-15 MT in FY12E, we expect CPPs to be in high demand through FY12E.

**Exhibit 18: Economic benefits of a captive power plant vs. power grid**

Details	Assumptions
Plant load factor (in %)	80
Coal required to produce one unit of electricity (1 kwh) in kg	0.54
Cost of coal per tonne	100
Cost of one unit of electricity from grid	3.5
Cost of one unit of electricity from captive power plant	2.5
<b>Savings per unit of electricity (in Rs)</b>	<b>0.97</b>

Source: IEX, ICICIdirect.com Research,

### List of Order wins for Thermax in the past

#### Exhibit 19: Major orders for Thermax – FY10

Date	Client	Product	Order value	Sector
Nov-09	Metal/Mining	CPP (2x20MW)	477	Energy
Oct-09	Steel company	CPP (60MW)	450	Energy
Sep-09	Infrastructure company	IPP (270 MW)	1,001	Energy
Sep-09	Municipal bodies	litres per day)	155	Environment
Aug-09	Cement company	Boilers (4 x 250 TPH CFBC boilers)	255	Energy
Aug-09	Export	Air pollution control systems	90	Environment

Source: Company, ICICIdirect.com Research

Order Value in Rs Crore

#### Exhibit 20: Major orders for Thermax – FY09

Date	Client	Product	Order value	Sector
Aug-08	Steel company	CPP	415	Energy
Jul-08	Petrochemical refinery	Boilers (4 x 250 TPH CFBC boilers)	820	Energy
May-08	Petrochemical refinery	Heat recovery steam generator (HRSG)	71	Energy

Source: Company, ICICIdirect.com Research

Order Value in Rs Crore

#### Exhibit 21: Major orders for Thermax – FY07

Date	Client	Product	Order value	Sector
Nov-06	Cement company	CPP (75 MW)	383	Energy
Sep-06	Cement company	CPP (25 MW)	88	Energy
Sep-06	NA	CPP (25 MW)	164	Energy
Jun-06	Soda manufacturer	2 X 25 MW Cogeneration Plant	100	Energy
Jun-06	Power company	Coal washery rejects fired plant	150	Energy
Jun-06	Cement company	CPP (18 MW)	100	Energy
Apr-06	Petrochemical refinery	Steam Generator (HRSG)	360	Energy

Source: Company, ICICIdirect.com Research

Order Value in Rs Crore

#### Exhibit 22: Major orders for Thermax – FY06

Date	Client	Product	Order value	Sector
Feb-06	Industrial house	Waste Heat Recovery Boilers	107	Energy
Feb-06	Cement company	2 CPPs (1x22 MW and 1x15 MW)	119	Energy
Nov-05	Steel company	CPP (20 MW)	56	Energy
Nov-05	Cement company	CPP (36 MW)	123	Energy
Oct-05	Steel company	Waste heat recovery boilers	50	Energy
Oct-05	Cement company	CPP (18 MW)	55	Energy
Sep-05	Pipes manufacturer	CPP (43 MW)	96	Energy

Source: Company, ICICIdirect.com Research

Order Value in Rs Crore

**Exhibit 23: Major orders for Thermax – FY05**

Date	Client	Product	Order value	Sector
Mar-05	Diversified company	CPP (20 MW)	80	Energy
Sep-04	Iron & Steel industry	CPP (18.5 MW)	65	Energy
Sep-04	Steel company	8 Waste Heat Recovery Boilers	90	Energy
Sep-04	Cement company	CPP	93	Energy

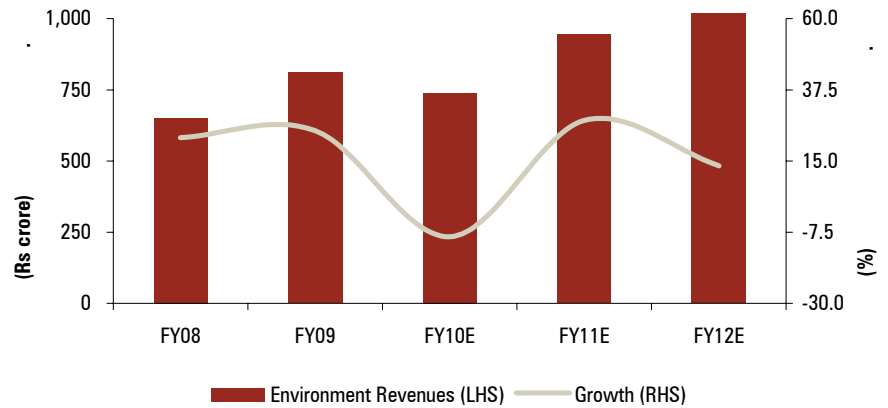
Source: Company, ICICIdirect.com  
Order Value in Rs Crore

**Positive outlook for environment segment**

The net sales of the environment segment are estimated to grow at 21% CAGR in FY10E-12E to Rs 1,071 crore driven by robust GDP growth and stricter environmental regulations

The environment segment has witnessed robust growth over the last few years (26% CAGR of net sales in FY05-09) driven by strong GDP growth and stricter environmental regulations by the government. During 9MFY10, net sales declined by 19% YoY to Rs 493 crore as a result of the cutback in industrial capex. With the pick up of industrial capex and recent technological partnerships by Thermax (SPX Corporation, GE Water and Wehrle Umwelt), we are bullish on the growth prospects of the environment segment. Consequently, we estimate that net sales will grow at 21% CAGR in FY10E-12E to Rs 1,071 crore.

**Exhibit 24: Environment segment revenues and growth**



Source: Company, ICICIdirect.com Research

**Exhibit 25: Technological partnerships by Thermax – Environment segment**

Year	Technology partner	Segment	Product focus
2008	Balcke Durr	Environment	Air pollution control equipment
2009	Wehrle Umwelt	Environment	Water and waste treatment
2009	GE Water	Environment	Water and waste treatment
2009	SPX Corporation	Environment	Air pollution control equipment

Source: Company, ICICIdirect.com Research

Several technological partnerships by Thermax will grow in the environment segment

Low sewage penetration and increase in urbanisation rate in India will drive demand for water and waste treatment products

### Water & waste treatment segment provides maximum growth opportunities

The water & waste treatment business accounts for nearly 30% of the net sales of the environment segment (FY09). In our view, the water & waste treatment business holds maximum growth potential due to:

- Low penetration of sewage treatment in urban India (24-25%) and non-existence of sewage treatment in villages
- Rapid urbanisation (40% at the end of the decade vs. 29% at present), resulting in the requirement of additional sewage treatment capacity
- Significant funding (~ Rs 1,500 crore) coming from the Jawaharlal Nehru National Urban Renewal Mission (JNNURM)
- Generation of higher industrial wastes with the rapid industrial expansion in the country

Of the nearly Rs 1,500 crore budgeted under the JNNURM scheme, Thermax has already captured a 10% share (municipal corporations of Maharashtra and Jammu & Kashmir). The management believes it can capture 50% share of this market due to its prior experience and technological expertise.

#### Exhibit 26: Thermax's experience in water and waste treatment projects

No. of plants	Total Capacity in MLD (million liters per day)		Corporation
14 Sewage treatr	160 MLD		Maharashtra and Jammu & Kashmir Corporations
2 Sewage treatme	6 MLD		Delhi Municipal Corporation
1 Sewage treatme	15 MLD		Pimpri-Chinchwad Municipal Corporation
1 Sewage treatme	42 MLD		Lucknow (U.P.)
1 Sewage treatme	29 MLD		Allahabad (U.P.)
3 Sewage treatme	14.2 MLD		J&K Lakes and Waterways Development Authority
2 Sewage treatme	16 MLD		Punjab Urban Planning & Development Authority

Source: Company, \*Million litres per day

### Positive for air pollution plants

Solid growth opportunities exist for Thermax in the air pollution equipment business (~48% share of environment segment net sales in FY09) due to stricter environmental regulations and the company's partnership with SPX Corp. The company has won large projects in the space (including an over Rs 70-crore order from a large aluminium producer in Q3FY10). The air pollution equipment market has been historically dominated by MNCs. In our view, air pollution equipment will witness robust growth over the next few years driven by the government's plans to shift a majority of new capacity additions to supercritical technology, resulting in increased requirement for air pollution equipment.

With the recent technological partnership with B&W (supercritical), Thermax will raise the boiler production capacity by 3,000 MW

Operating margins were marginally lower in FY10E due to lower billing rates, lower revenues and higher commodity prices in Q3FY10

Economies of scale and indigenous manufacturing capabilities driving Bhel's superior margin profile vis-à-vis industry peers

**Spare capacity exists to undertake new orders**

With the recent partnership with B&W for super-critical technology, Thermax has announced plans to set up a new plant with an initial capacity of 3,000 MW. The announcement follows the commissioning of a facility in Baroda in FY08 (based on sub-critical technology) of 1,500 MW. With this plant operating at a utilisation rate of 70-75%, spare capacity exists for Thermax to undertake some large new orders (200-250 MW each). According to the management, the company has received enquiries for orders in the range of 250-300 MW.

For the environment segment, capacity constraints do not exist as Thermax outsources the entire manufacturing of air pollution products. The company assembles water projects on client site, thus not requiring to operate a manufacturing facility.

According to the management, capex for FY10E will be Rs 100 crore (vs. Rs 165 crore in FY09). It was lower due to the capital constraints faced by the company during the year. We expect the capex to be higher in FY11E (Rs 120 crore) fuelled by the improved demand environment.

**Limited scope for margin expansion**

**Margin expansion expected in FY11E...**

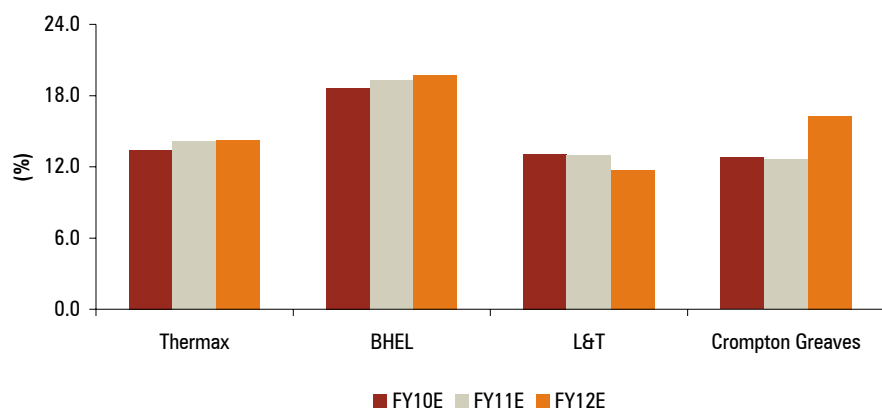
As a result of low billing rates on orders won in FY09, lower revenues, upturn of commodity prices (especially in Q3FY10), Thermax's EBITDA margin contracted to 13.3% (vs. 13.9% in FY09). Consequently, we expect the FY10E EBITDA margin (13.7%) to remain slightly lower than FY09.

With the economy gaining momentum and with Thermax winning new orders at higher billing rates, we estimate that the EBITDA margin will increase to 14.2% in FY11E and 14.3% in FY12E (equal to average margins in FY06-08). However, we believe the margin expansion will be limited by the anticipated rise in proportion of EPC projects (~45% of the order book in Q3FY10) and Thermax's foray into the supercritical arena.

**...but margin still significantly lower than Bhel**

Despite the anticipated margin expansion in FY11E, Thermax's EBITDA margin will continue to remain lower than market leader Bhel (18.6% EBITDA in FY10E). Bhel's economies of scale, indigenous manufacturing capabilities (~90%) and presence in the high margin nuclear segment contribute to the company's higher margin.

**Exhibit 27: Thermax's EBITDA margin vs. peers**



Source: Bloomberg, ICICIdirect.com Research



**Exhibit 28: Annual boiler manufacturing capacity - Thermax vs. peers**

<b>Company</b>	<b>MW</b>
Thermax	1,500
BHEL	15,000
L&T	4,000
BGR Energy	5,000*
Cethar Vessels	8,000

Source: Company, ICICIdirect.com Research

\*BGR Energy expects to reach 5,000MW of manufacturing capacity by FY14

PAT will decline 66% in FY10E due to the Purolite litigation

#### **Out-of-court settlement of Purolite litigation**

PAT will decline significantly in FY10E (down 66% to Rs 98 crore) due to the recently concluded out-of-court settlement (Rs 178 crore) with the US-based chemical company Purolite International, thus ending an outstanding legal dispute regarding its ion exchange resin business in the US. The settlement will be paid in four instalments beginning Q1FY11. Thermax's ion exchange resins and chemicals business contributed net sales of Rs 146 crore in FY09.

Purolite filed a lawsuit in 2005 after four of its employees joined Thermax US claiming they misused trade secrets related to the production process of resins. In our view, this settlement is a positive as we view this as an implied technology acquisition cost, allowing Thermax to focus on the waste treatment segment with no further disputes.

## Risks and concerns

### Lower sales on slowdown of global economy

As nearly 20% of Thermax's net sales are through exports, any external shock in the global economy could adversely impact Thermax's topline growth. Further, as India is not decoupled from the global economy, any such slowdown could impact the capacity expansion plans of industrial houses based in India, further inhibiting growth of Thermax's domestic sales.

### Higher coal prices may hit demand for CPPs

A significant rise in coal prices could adversely impact the demand for CPPs in India, with the differential between power purchased from the grid and captive power reducing.

### Loss of market share to competitors

Thermax faces significant competition from domestic and low cost Chinese players in the utilities segment. Competitors, both domestic and Chinese, enjoy higher execution capabilities and economies of scale. In our view, Thermax could lose market share in case competitors lower prices.

### Loss of client confidence on slow execution of orders

An inability to execute the order book successfully will result in a loss of clients' confidence and Thermax's reputation in the industry. Both these factors may impact the company's ability to capture new orders in future.

### Appreciation of rupee may lower profitability

An appreciation of the rupee could result in lowering the competitive position of Thermax and margins generated through the exports business (~20% of net sales in FY09).

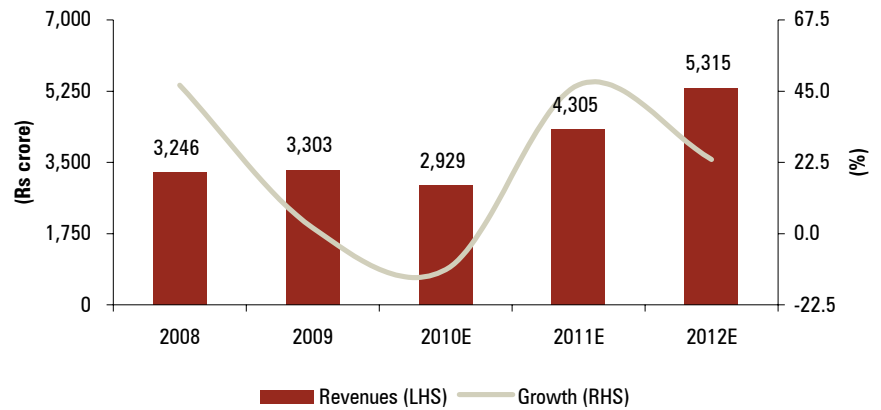
## Financials

### Net sales to grow at 35% CAGR in FY10-12E

In 9MFY10, Thermax's net sales declined 15% YoY to Rs 1,966 crore primarily due to lower billing rates in FY09 and cutback of some orders in FY09. As a result, we estimate FY10E net sales will decline by 10% to Rs 2,929 crore. With the economy gaining momentum and robust growth of the order book in April-December 2009 (+80% to Rs 5,233 crore), we estimate net sales will grow at 35% CAGR in FY10E-12E. Net sales growth in FY11E will be driven by the revenue recognition of large EPC orders won in FY10 (including the order for Meenakshi Group and Essar Steel). Growth of the environment segment net sales (21% CAGR in FY10E-12E to Rs 1,071 crore) will be driven by stricter environmental regulations and the consequent robust demand for water and air treatment products.

With demand returning to the market as companies in a majority of Thermax's target sectors (cement, steel and petrochemicals) are announcing capacity addition plans, we expect billing rates to be firmer, further supporting topline growth.

**Exhibit 29: Net sales (FY08-12E)**

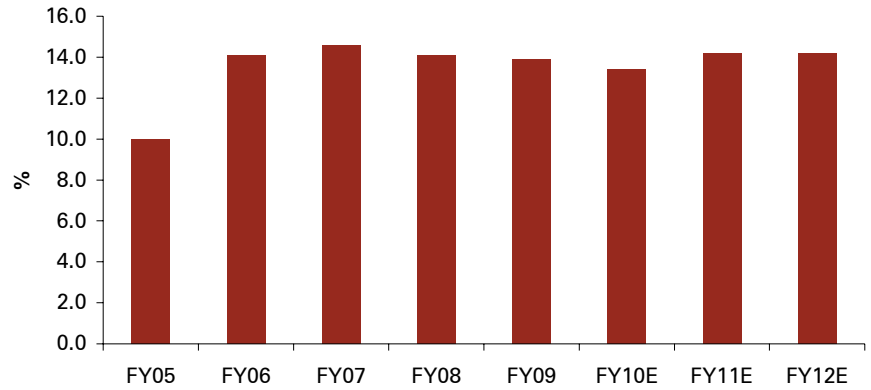


Source: Company, ICICIdirect.com Research

### EBITDA margin to marginally improve in FY11E

In 9MFY10E, the EBITDA margin contracted by 60 basis points to 13.3% (vs. 13.9% in FY09) due to the lower billing rates on orders won in FY09, lower revenues and higher commodity prices in Q3FY10. We expect the EBITDA margin to improve in FY11E to 14.2% fuelled by the execution of projects at higher billing rates (due to improved demand environment). However, scope for margin expansion will be limited in our view due to the high share of low margin EPC contracts in Thermax's order book (45% in Q3FY10).

**Exhibit 30: EBITDA margin (FY08-12E)**

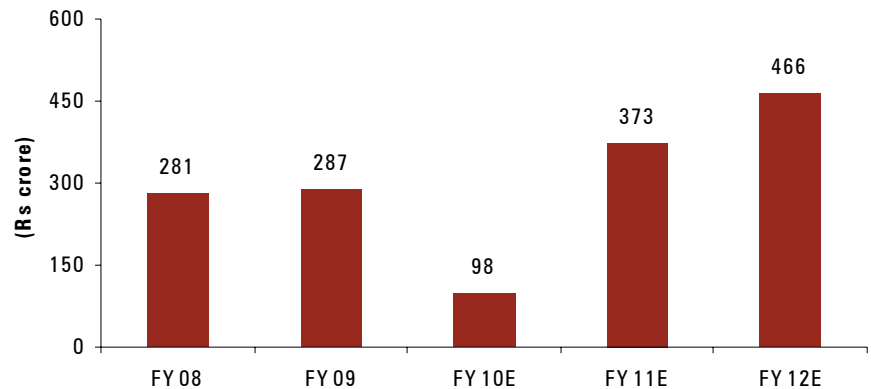


Source: Company, ICICIdirect.com Research

**PAT to decline 66% in FY10E**

As a result of the recently concluded out-of-court settlement of the Purolite litigation and lower operating results, we estimate that Thermax’s PAT will decline 66% in FY10E to Rs 98 crore. With the solid growth of topline anticipated over the next two years, we estimate Thermax’s PAT will grow at 18% CAGR in FY09-12E to Rs 466 crore.

**Exhibit 31: Profit after tax (FY08-12E)**

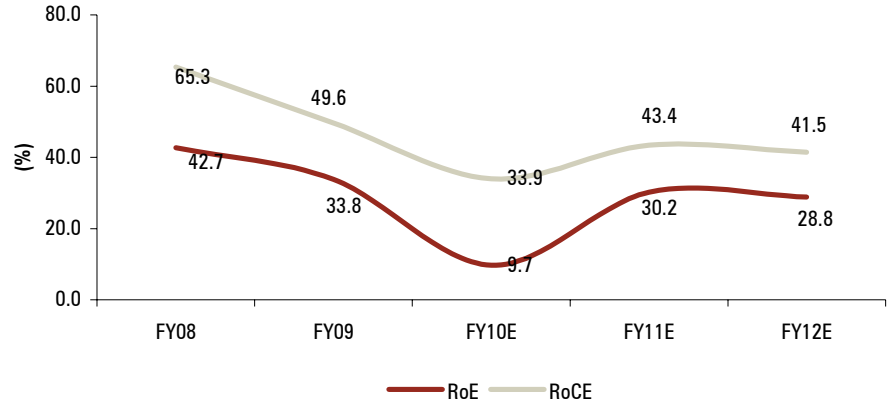


Source: Company, ICICIdirect.com Research

**Return ratios to improve in FY11E**

With the out-of-court settlement in Q4FY10, we estimate that RoCE and RoNW will decline significantly in FY10E to 34% and 10%, respectively (vs. 50% and 34% in FY09). Return ratios are expected to improve in FY11E as a result of improved operational profitability.

**Exhibit 32: RoCE and RoNW**

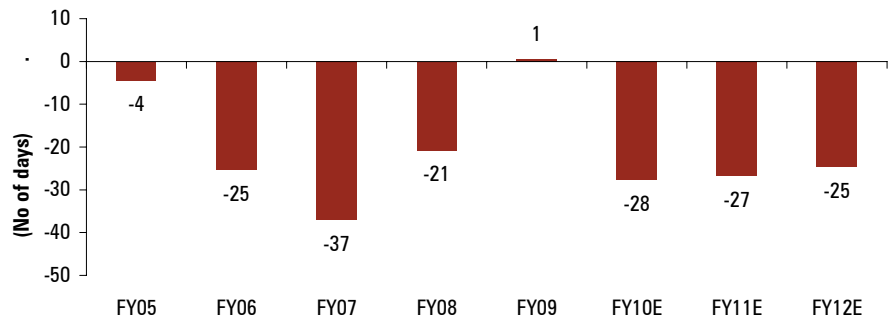


Source: Company, ICICIdirect.com Research

**Working capital to continue to remain negative in FY11E-12E**

In our view, Thermax will continue to enjoy a negative working capital cycle in FY11E-12E despite higher proportion of large contracts on its order book due to its high revenue recognition rate. Nearly two-thirds of the projects on Thermax’s order book have an execution period of more than a year.

**Exhibit 33: Working capital cycle (FY05-12E)**



Source: Company, ICICIdirect.com Research

There is limited upside at the current stock price of Thermax due to its limited execution experience of utility orders

### Valuation

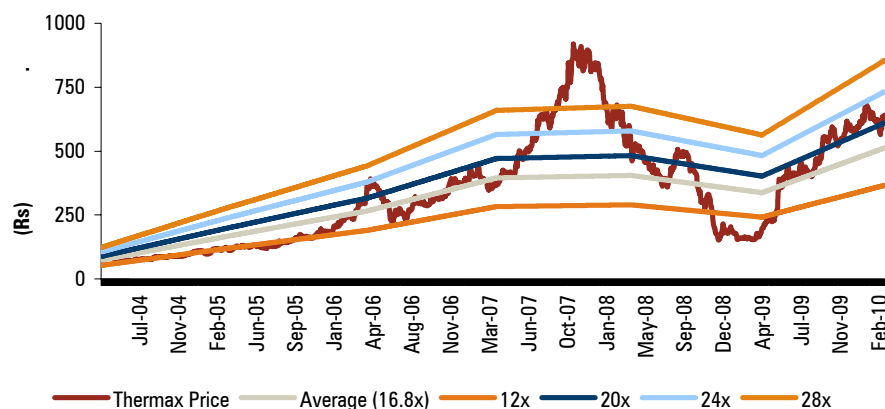
At the CMP of Rs 682, the stock is trading at a P/E of 21.5x FY11E (vs. 22.5x for market leader Bhel). The stock has traded in a P/E band of 12x-30x due to the cyclical nature of Thermax’s earnings. With the company’s entry in the utility segment and the recent technological partnership with B&W (supercritical), we believe the revenue stream will be more stable, providing support to the stock price. We have valued Thermax using the DCF methodology due to the longer execution cycles associated with its future orders. Although sales visibility was strong over the next one or two years, Thermax’s limited execution experience may inhibit new order growth in the future. Further, the current price offers limited upside. We are initiating coverage on the stock with an **ADD** rating.

#### Exhibit 34: DCF valuation assumptions

WACC (%)	11.83
Terminal Growth Rate (%)	3.0
PV of Free Cash Flows (Rs. Crore)	3,686
Terminal Value of Cash Flows (Rs. Crore)	4,757
Total Value of Free Cash Flows (Rs. Crore)	8,443
Share Count (in crore)	11.92
<b>DCF-derived Price Target</b>	<b>Rs. 705</b>
Implied PE (on FY11E EPS)	22.5

Source: Company, Bloomberg, ICICIdirect.com Research

#### Exhibit 35: Thermax P/E Band Chart (1-year forward)

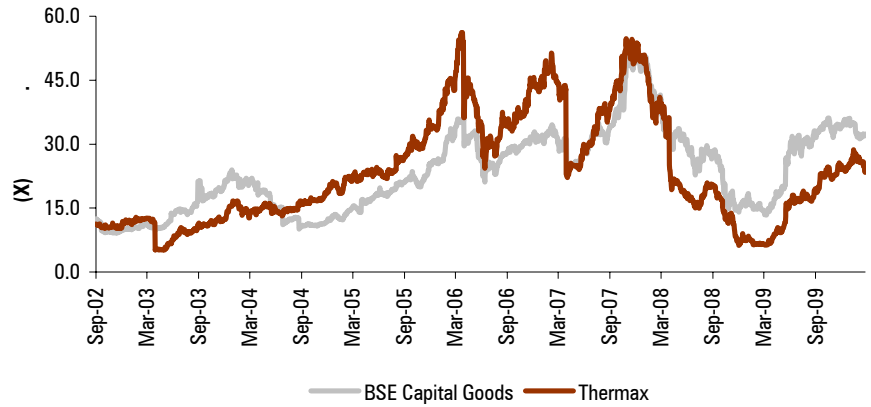


Source: Company, Thomson, ICICIdirect.com Research

The company is trading well above its average P/E multiple of 16.8x on a 1 yr forward basis

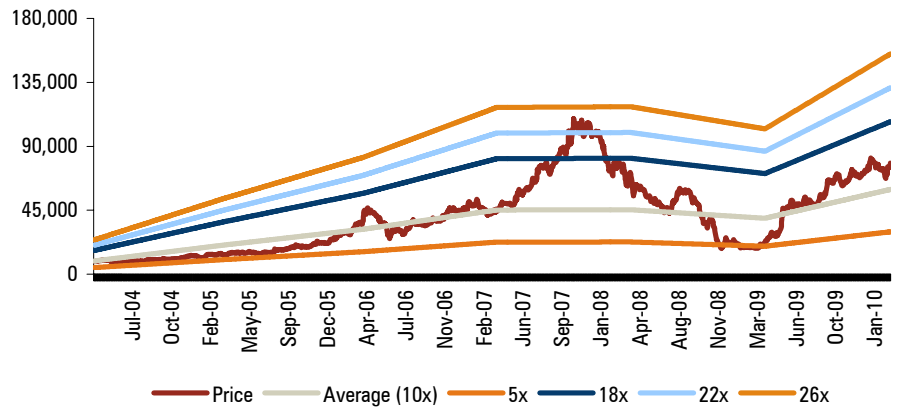
Thermax has historically traded at discount to the valuations of the capital goods sector. Going forward we believe this gap to converge depending upon the order wins in IPP segment and execution of the same

**Exhibit 36: Thermax P/E vs. BSE Capital goods sector P/E**



Source: Company, ICICIdirect.com Research

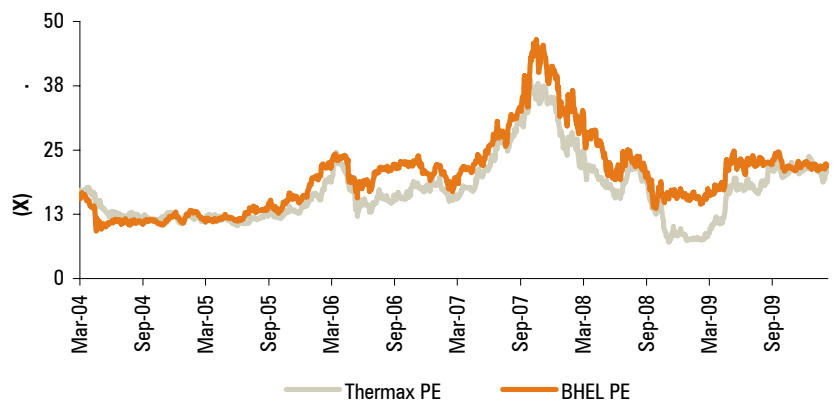
**Exhibit 37: EV/EBITDA Band Chart – Thermax (1-year forward)**



Source: Company, Thomson, ICICIdirect.com Research

The valuation gap between BHEL and Thermax has almost converged which implies that Thermax 's valuations have reached fair zone in the short term.

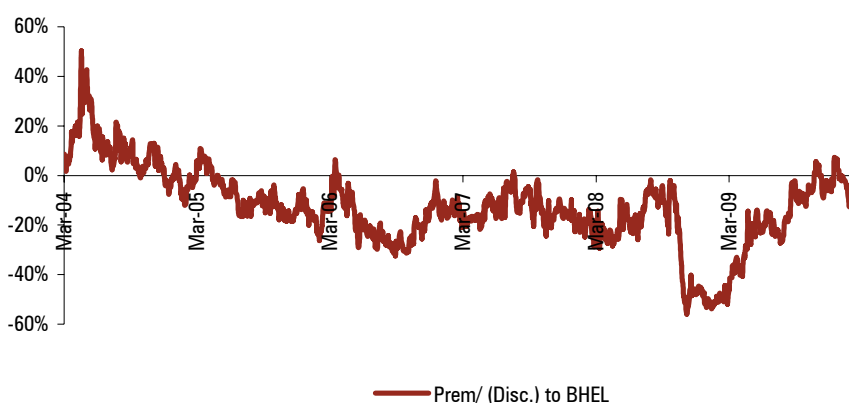
**Exhibit 38: Thermax, BHEL trading at a similar P/E multiple (1-year forward)**



Source: Company, Thomson, ICICIdirect.com Research



**Exhibit 39: Thermax has always traded at a discount to Bhel's P/E multiple**



Source: Company, Thomson, ICICIdirect.com Research

**Exhibit 40: Peer valuation in capital goods sector**

	Market Cap	Revenue (Rs crore)		EBITDA Margin (%)		PE (x)		EV/EBITDA (x)		P/B (x)	
	(Rs crore)	FY10E	FY11E	FY10E	FY11E	FY10E	FY11E	FY10E	FY11E	FY10E	FY11E
<b>Thermax</b>	8,127	2,929	4,305	13.4	14.2	34.0	21.8	19.5	12.2	12.2	7.6
<b>BHEL</b>	116,506	32,665	40,850	18.6	19.3	27.2	21.5	18.0	13.9	7.4	5.8
<b>L&amp;T</b>	97,544	42,376	53,338	13.1	13.0	29.3	23.6	19.1	15.5	5.2	4.6
<b>Crompton Greaves</b>	9,201	9,425	10,701	12.8	12.7	12.2	10.7	7.4	6.2	3.7	2.9
<b>Cummins</b>	9,425	3,094	3,594	17.9	17.3	20.5	18.2	16.0	13.9	5.3	4.5
<b>BGR Energy</b>	3,672	2,737	4,083	12.0	11.7	21.4	15.1	11.8	8.8	5.3	4.0

Source: ICICIdirect.com Research

**Exhibit 41: Profit & Loss Account**

Rs Crore	FY08	FY09	FY10E	FY11E	FY12E
<b>Sales</b>	3,246	3,303	2,929	4,305	5,315
<b>Growth (%)</b>	46.9	1.8	-11.3	47.0	23.5
<b>Op. Expenditure</b>	2,795	2,850	2,535	3,695	4,558
<b>EBITDA</b>	451	453	393	610	757
<b>Growth (%)</b>	42.8	0.4	-13.2	55.0	24.1
<b>Depreciation</b>	22	32	41	48	54
<b>EBIT</b>	430	421	352	562	702
<b>Interest</b>	1	3	2	5	7
<b>Other Income</b>	0	0	7	0	0
<b>Extraordinary Item</b>	2	1	-178	0	0
<b>PBT</b>	430	419	179	556	695
<b>Growth (%)</b>	48.1	-2.6	-57.3	211.0	25.0
<b>Tax</b>	150	132	81	184	229
<b>Rep. PAT before MI</b>	281	287	98	373	466
<b>Minority Interest (MI)</b>	0	0	0	0	0
<b>Rep. PAT after MI</b>	281	287	98	373	466
<b>Adjustments</b>	0	31	0	0	0
<b>Adj. Net Profit</b>	281	318	98	373	466
<b>Growth (%)</b>	44.9	13.3	-69.1	279.9	25.0

Source: Company, ICICIdirect.com Research

**Exhibit 42: Balance Sheet**

Rs Crore	FY08	FY09	FY10E	FY11E	FY12E
<b>Equity Capital</b>	24	24	24	24	24
<b>Reserves &amp; Surplus</b>	712	938	1,040	1,381	1,803
<b>Shareholder's Fund</b>	736	962	1,064	1,405	1,827
<b>Borrowings</b>	0	0	48	71	82
<b>Unsecured Loans</b>	0	0	0	0	0
<b>Deferred Tax Liability</b>	15	18	18	18	18
<b>Source of Funds</b>	<b>751</b>	<b>980</b>	<b>1,130</b>	<b>1,494</b>	<b>1,928</b>
<b>Gross Block</b>	408	572	636	728	810
<b>Less: Acc. Depreciation</b>	134	151	182	224	272
<b>Net Block</b>	274	420	454	505	538
<b>Capital WIP</b>	48	18	43	59	32
<b>Net Fixed Assets</b>	322	438	497	564	570
<b>Intangible Assets</b>	4	20	13	7	0
<b>Investments</b>	580	176	176	176	176
<b>Cash</b>	28	341	666	1,063	1,541
<b>Trade Receivables</b>	505	541	660	975	1,127
<b>Loans &amp; Advances</b>	190	202	293	433	501
<b>Inventory</b>	200	266	326	480	554
<b>Total Current Asset</b>	1,009	1,616	2,023	3,030	3,801
<b>Current Liab. &amp; Prov.</b>	1,164	1,270	1,580	2,282	2,619
<b>Net Current Asset</b>	-155	346	444	748	1,181
<b>P&amp;L Account</b>	0	0	0	0	0
<b>Application of Funds</b>	<b>751</b>	<b>980</b>	<b>1,130</b>	<b>1,494</b>	<b>1,928</b>

Source: Company, ICICIdirect.com Research

**Exhibit 43: Cash flow statement**

Rs Crore	FY08	FY09	FY10E	FY11E	FY12E
Net Profit before Tax	430	419	179	556	695
Other Non Cash Exp	15	18	0	0	0
Depreciation	22	32	41	48	54
Direct Tax Paid	142	139	81	184	229
Other Non Cash Inc	0	0	0	0	0
Other Items	-39	-34	2	5	7
CF before change in WC	286	296	142	426	527
Inc./Dec. In WC	-148	-159	227	93	44
CF from Operations	<b>138</b>	<b>136</b>	<b>369</b>	<b>519</b>	<b>571</b>
Pur. of Fix Assets	-180	-165	-90	-108	-54
Pur. of Inv	2	410	0	0	0
CF from Investing	<b>-135</b>	<b>284</b>	<b>-90</b>	<b>-108</b>	<b>-54</b>
Inc./Dec. in Debt	0	0	48	23	11
Inc./Dec. in Net Worth	0	0	0	0	0
Others	-38	-115	-2	-37	-51
CF from Financing	<b>-38</b>	<b>-115</b>	<b>46</b>	<b>-14</b>	<b>-40</b>
Opening Cash Balance	62	28	341	666	1,063
Closing Cash Balance	<b>28</b>	<b>341</b>	<b>666</b>	<b>1,063</b>	<b>1,541</b>

Source: Company, ICICIdirect.com Research

**Exhibit 44: Key ratios**

	FY08	FY09	FY10E	FY11E	FY12E
Raw Material	68.0	64.3	63.3	62.8	62.7
Employee Expenditure	7.5	7.8	9.8	9.3	9.3
Other Expenditure	0.1	0.1	13.2	13.2	13.2
Effective Tax Rate	34.8	31.5	45.1	33.0	33.0
<b>Profitability Ratios (%)</b>					
EBITDA Margin	14.1	13.9	13.4	14.2	14.2
PAT Margin	8.8	8.8	3.4	8.7	8.8
<b>Per Share Data (Rs)</b>					
Revenue per share	1,362.1	1,386.1	1,229.0	1,806.5	2,230.3
EV per share	670.5	644.2	621.0	589.6	550.4
Book Value	61.8	80.7	89.3	117.9	153.4
Cash per share	11.7	143.0	279.4	446.2	646.6
EPS	23.6	24.1	8.2	31.3	39.1
Cash EPS	27.0	27.6	12.4	37.2	45.9
DPS	8.0	5.0	0.0	2.3	3.2

Source: Company, ICICIdirect.com Research

**Exhibit 45: Key ratios**

Return Ratios	FY08	FY09	FY10E	FY11E	FY12E
RoNW	42.7	33.8	9.7	30.2	28.8
ROCE	65.3	49.6	33.9	43.4	41.5
ROIC	24.3	22.8	8.8	23.1	22.1
Financial Health Ratio					
Operating CF (Rs Cr)	138	136	369	519	571
FCF (Rs Cr)	-26	-3	450	411	517
Cap. Emp. (Rs Cr)	736	962	1,112	1,476	1,909
Debt to Equity (x)	0.0	0.0	0.0	0.1	0.0
Debt to Cap. Emp. (x)	0.0	0.0	0.0	0.0	0.0
Interest Coverage (x)	338.1	128.8	149.4	102.6	100.4
Debt to EBITDA (x)	0.0	0.0	0.1	0.1	0.1
DuPont Ratio Analysis					
PAT/PBT	65.2	68.5	54.9	67.0	67.0
PBT/EBIT	100.2	99.5	50.8	99.0	99.0
EBIT/Net Sales	13.4	12.9	12.0	13.1	13.2
Net Sales/Total Asset	477.9	377.1	277.6	328.1	310.6
Total Asset/NW	1.0	1.0	1.1	1.1	1.1

Source: Company, ICICIdirect.com Research

**Exhibit 46: Key ratios**

Working Capital	FY08	FY09	FY10E	FY11E	FY12E
Working Cap./Sales (%)	-5.6	0.2	-7.6	-7.3	-6.8
Inventory turnover	22.8	26.0	36.9	34.1	35.5
Debtor turnover	50.6	58.5	74.8	69.3	72.2
Creditor turnover	114.5	119.1	162.3	155.8	161.9
Current Ratio	0.9	1.3	1.3	1.3	1.5

Source: Company, ICICIdirect.com Research

**Exhibit 47: Key ratios**

FCF Calculation	FY08	FY09	FY10E	FY11E	FY12E
EBITDA	451	453	393	610	757
Less: Tax	150	132	81	184	229
NOPLAT	302	321	312	426	527
Capex	-180	-165	-90	-108	-54
Change in working cap.	-148	-159	227	93	44
FCF	-26	-3	450	411	517

Source: Company, ICICIdirect.com Research

**Exhibit 48: Key Ratios**

Valuation	FY08	FY09	FY10E	FY11E	FY12E
PE (x)	28.6	27.9	33.5	21.5	17.2
EV/EBITDA (x)	17.7	16.9	18.8	11.5	8.7
EV/Sales (x)	2.5	2.3	2.5	1.6	1.2
Dividend Yield (%)	1.2	0.7	0.0	0.3	0.5
Price/BV (x)	10.9	8.3	7.5	5.7	4.4

Source: Company, ICICIdirect.com

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Strong Buy: 20% or more;  
 Buy: Between 10% and 20%;  
 Add: Up to 10%;  
 Reduce: Up to -10%  
 Sell: -10% or more;

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