NHPC – ADD

18 April 2011

Recommendation upgrade

IIFL Institutional Equities

Regulated hydropower play at book value

NHPC has under-performed the Sensex by 27% over the past 12 months, owing to muted earnings growth and delays in capacity addition. However, going forward, even with the most conservative estimate on capacity addition, we expect NHPC to add ~1.3GW over the next 12-18 months, driving earnings CAGR of 12% over FY11-13ii. Based on the P/BV model, the stock's valuation prices-in earnings growth of 3.4%. Moreover, at 1x consolidated FY12ii BV, the valuation is inexpensive. We upgrade NHPC to ADD.

NHPC capacity to increase by 25% over next 12-24 months: In the first four years of the XI Plan (FY08-11), NHPC added just 1.2GW, or 22% of the planned 5.3GW, owing to geological problems, delays in environmental clearances, local agitations, etc. These factors, which are beyond NHPC's control, have constantly derailed the company's capacity addition programme. But now, in the light of rapid progress in various projects, the company as well as CEA expects an addition of 1.2-1.3GW over the next 12 months (by end-FY12).

Low risk to our earnings forecast of 12% CAGR: Given NHPC's execution track record and uncertainties over hydro projects, we are building in 12 months' delay in some of the projects that management expects to commission in FY12. Thus, we estimate NHPC will add 221MW in FY12 and another 1.1GW in FY13. Also, as most of NHPC's capacities are on snow-fed rivers, there is little risk from variations in rainfall. Thus, our estimate of 12% earnings CAGR over FY11-13ii has limited risk, given our conservative assumption on capacity addition and healthy RoE (~17%) on core assets.

Inexpensive valuation; we upgrade to ADD: After 27% underperformance vis-à-vis the Sensex, NHPC is now trading at 1x one-year-forward book. Based on the P/BV model, the stock's valuation prices in earnings growth of 3.4%—lower than that of NTPC. Given the emerging clarity on capacity addition along with the cheap valuation, we expect the stock to re-rate from hereon and outperform the broader market. We see NHPC, trading at one-time one-year forward book, as the best hydropower play in India, and upgrade the stock to ADD.

Company update

CMP	**Rs25**
12-mth TP (Rs)	***28 (12%)***
Market cap (US$ m)	**6,958**
Bloomberg	**NHPC IN**
Sector	**Utilities**

Price performance (%)

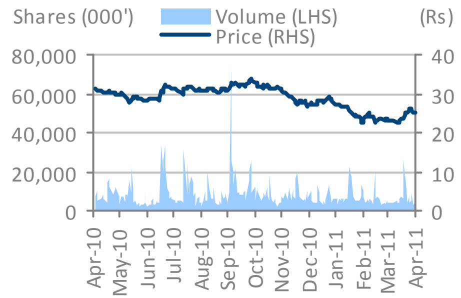
	1M	3M	1Y
NHPC	9.6	-6.9	-18.5
Rel. to Sensex	**4.5**	**-9.7**	**-27.3**
NTPC	6.0	-0.6	-11.5

Shareholding pattern (%)

Promoters	86.4
FIIs	1.8
DIIs	2.7
Others	9.1

52Wk High/Low (Rs)	34/22
Shares o/s (m)	12301
Daily volume (US$ m)	4
Dividend yield FY11ii (%)	1.9
Free float (%)	13.6

Stock performance



Financial summary (Rs m)

Y/e 03 Jan	FY09A	FY10A	FY11ii	FY12ii	FY13ii
Revenues (Rs m)	34,142	45,773	48,084	51,693	59,052
EBITDA Margins (%)	68%	76%	71%	73%	76%
Pre-Exceptional PAT (Rs m)	11,314	15,256	18,529	19,993	23,135
Reported PAT (Rs m)	10,397	21,756	18,529	19,993	23,135
EPS (Rs)	1.0	1.2	1.5	1.6	1.9
Growth (%)	-2.5	22.6	21.5	7.9	15.7
IIFL vs consensus (%)			0.4%	-1.5%	-6.0%
PER (x)	**24.7**	**20.2**	**16.6**	**15.4**	**13.3**
ROE (%)	5.2	8.1	6.6	6.7	7.4
Debt/Equity (x)	0.8	0.6	0.6	0.7	0.8
EV/EBITDA (x)	**17.8**	**11.8**	**12.3**	**11.3**	**10.5**
Price/Book (x)	1.4	1.1	1.1	1.0	1.0

Source: Company, IIFL Research. Priced as on 15 April 2011

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Set to add 25% capacity in the next 12-18 months

NHPC, as against its initial target of adding 5.3GW during the XI Plan period, has added only 1.2GW, or 22% of its target. The company's capacity addition programme has been adversely affected by several factors, among them: 1) climatic conditions (Leh floods); 2) delays from contractors; 3) environmental issues; 4) law and order problems; and 5) agitations and protests by local bodies.

Figure 1: Projects delayed on account of multiple issues and challenges

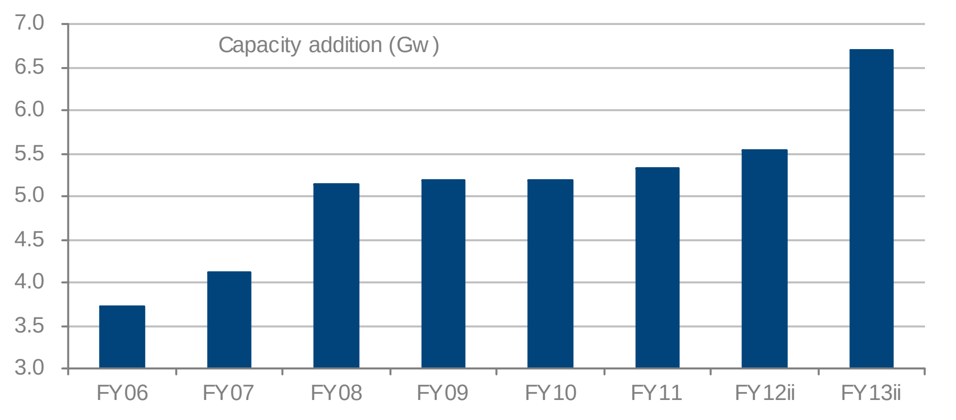
Project	State	Capacity (MW)	Reason for delay
Uri-II	Jammu & Kashmir	240	Law & order problem
Chamera-III	Himachal Pradesh	231	Geological problems
Teesta Low Dam - III	West Bengal	132	Protest by Gorkha Jan Mukti Morcha
Parbati - III	Himachal Pradesh	520	
Nimmo-Bazgo	Jammu & Kashmir	45	Law & order problem + flash floods
Chutak	Jammu & Kashmir	44	Law & order problem + flash floods
Teesta Low Dam - IV	West Bengal	160	Protest by Gorkha Jan Mukti Morcha
Parbati - II	Himachal Pradesh	800	Geological problems + contractual issue
Subansiri (Lower)	Assam	2,000	Geological + locals issues

Source: Company, IIFL Research

We have been highlighting these execution issues and risk to earnings, in our updates. Accordingly, we have maintained a cautious view on valuations as well as earnings.

That said, at present, NHPC is working on 4.5GW of generation capacity, of which capacity aggregating 1.2GW is approaching completion, based on the capex incurred by the company on these projects. Moreover, an independent check with vendors, and disclosures by CEA, suggest that NHPC seems well-placed to add at least 1.3GW capacity over the next 12-18 months.

Figure 2: NHPC to add 1.3GW over the next 12-18 months



Source: Company, IIFL Research

Figure 3: Construction in progress at various NHPC projects

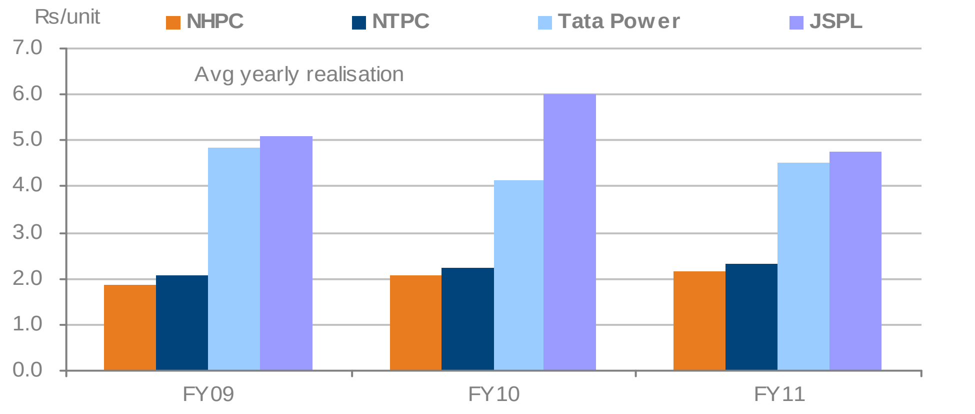
Source: Company, IIFL Research

...leading to 12% earnings growth through FY13

All of NHPC's plants—operational as well as those under construction—would earn assured 15.5% RoE (post-tax), and are eligible to earn incentives thereon (see annexure for details). While some of its upcoming projects have seen cost escalations, we believe the regulator is likely to allow these to be considered while setting tariffs (as seen in the case of the 540MW Dulhasti project). As such, the company is unlikely to experience under-recovery of costs on new projects.

As highlighted in our report "High on power, low on demand" coal/ gas shortages in India are set to affect operating parameters of IPPs. As such, there is a downside risk to their earnings and valuations. NHPC, on the other hand, remains insulated from such fuel procurement challenges. Additionally, NHPC's plants are located on snow-fed rivers, so their performance is immune to vagaries of rainfall. Moreover, in our view, NHPC's plants do not face risk of low offtake from state-owned SEBs, as it is one of the least-cost generators in India (selling prices of ~Rs2/unit), and is the preferred source to meet peak demand. As such, we see little risk to its base RoE of 15.5% and generation-linked incentives.

Figure 4: NHPC is the least cost producer of electricity



Source: Company, IIFL Research

Our earnings estimates build in conservative assumptions; instead of ramp-up in capacity in FY12 (as suggested by management and the CEA), we assume a ramp-up in FY13. Furthermore, while management remains confident it can contain its O&M costs well within the normative range, we build in under-recoveries (actual costs > normative) of ~Rs1bn in FY12-13ii.

Figure 5: We expect only 221MW to be added in FY12

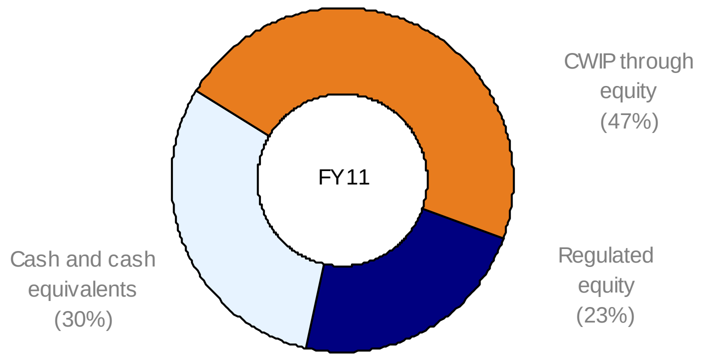
MW	Capacity (MW)	CEA estimate	Mgmt estimate	IIFL estimate
Parvati III	520	FY12	FY12	FY13
Chamera	231	FY12	FY12	FY13
Uri-II	240	FY12	FY12	FY13
Chutak	44	FY12	FY12	FY12
Nimoo Bazgo	45	FY12	FY12	FY12
Teesta III	132	FY12	FY12	FY12
Teesta IV	160	FY12	FY13	FY13
Total	1,372			
Capacity adds in FY12		1,372	1,212	221
Capacity adds in FY13			160	1,151

Source: CEA, Company, IIFL Research

Even with these conservative assumptions, we forecast NHPC's standalone earnings will register 18% CAGR through FY11-13ii. Further, NHPC's 51% subsidiary NHDC Ltd, which operates a 1500MW hydro capacity, will continue to earn the assured 15.5% RoE.

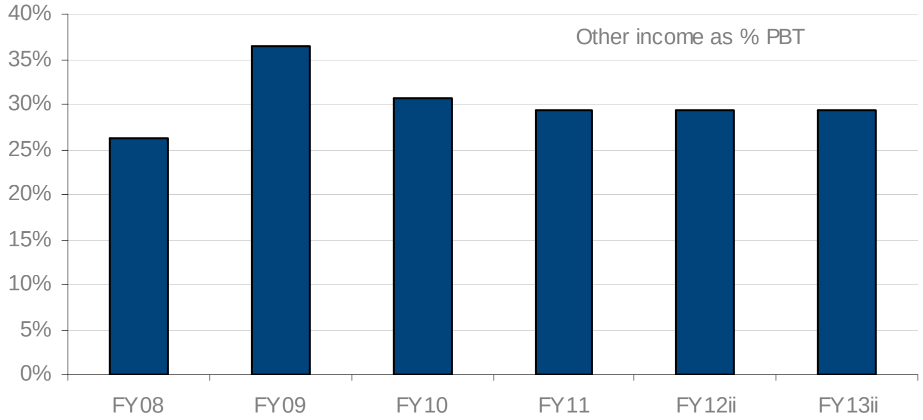
Thus, we estimate NHPC's consolidated earnings will register 12% CAGR through FY11-13ii. Reported earnings growth would have been higher, but for the fact that treasury income accounts for almost 30% of PBT on which it does not make 15.5% post-tax RoE (NHPC has Rs103bn cash and cash equivalents).

Figure 6: Reported RoE suppressed, as only 23% of networth is in regulated equity



Source: Company, IIFL Research

Figure 7: 30% of the pre-tax profit comes from other income



Source: Company, IIFL Research

Computation of NHPC's core RoE

NHPC's reported RoE is suppressed as 75% of the company's networth is deployed in CWIP and investments which earn nil to very low return. On its core operations (adjusting for CWIP + investment), the company is making a healthy RoE of 17% (15.5% RoE on operational projects + incentives due to efficient operations).

Figure 8: NHPC makes a core RoE of 17%

FY10	Rs m
Regulated Equity @ FY10	66,800
Core RoE @ 15.5%	10,354
Incentives net of tax	2,489
Uncer recoveries	1,200
Core RoE (%)	17.4

Source: Company, IIFL Research

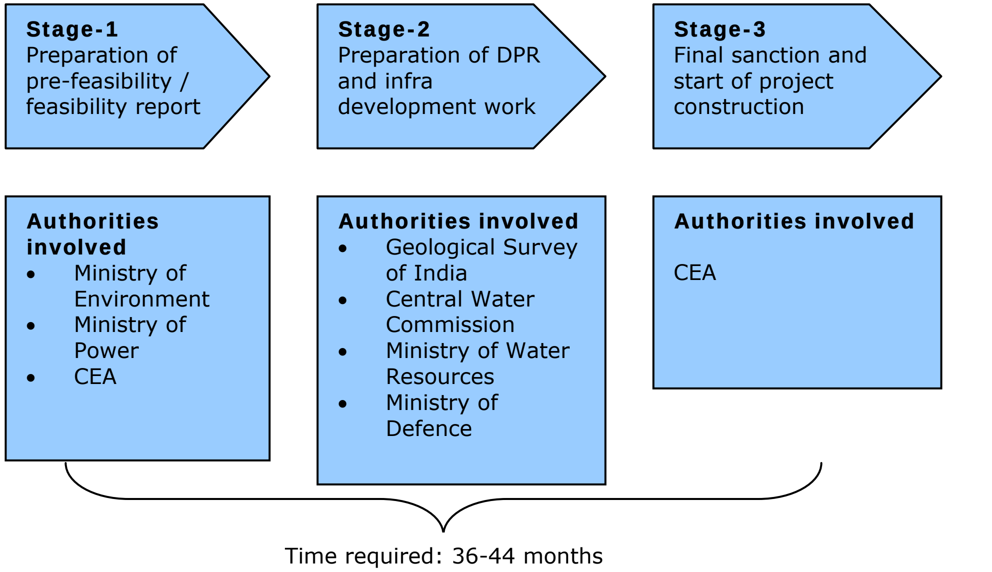
Changes in regulations could boost earnings growth

Hydro projects have longer gestation periods. In India, development of hydro projects is particularly cumbersome, given the associated regulatory clearances that typically exceed 36 months.

Firstly, unlike thermal projects, which are de-licensed as per the Electricity Act, a hydro developer such as NHPC requires several approvals from the government and associated regulatory bodies before actual construction can begin (see chart below). Fast-track completion of this process takes 30-36 months, and under normal circumstances, it often exceeds 40-46 months.

Further, during the construction period, which typically lasts for 6-7 years, a developer is exposed to geological risks and natural calamities that can further delay a project and have a significant impact on project IRR.

Figure 9: Hydro projects take 3-4 years to get all regulatory clearances



Note: PSUs such as NHPC also need approval from the Public Investment Board (PIB), and the Cabinet Committee of Economic Affairs, which is obtained in the third phase

Hydro project developers have therefore made several appeals to CERC and the Government of India to compensate them for project delays beyond their control. Among the power generators' most important requests are that they be allowed to: 1) earn return on project equity during the construction period; and 2) charge differential tariff (peak and non-peak) for operating projects.

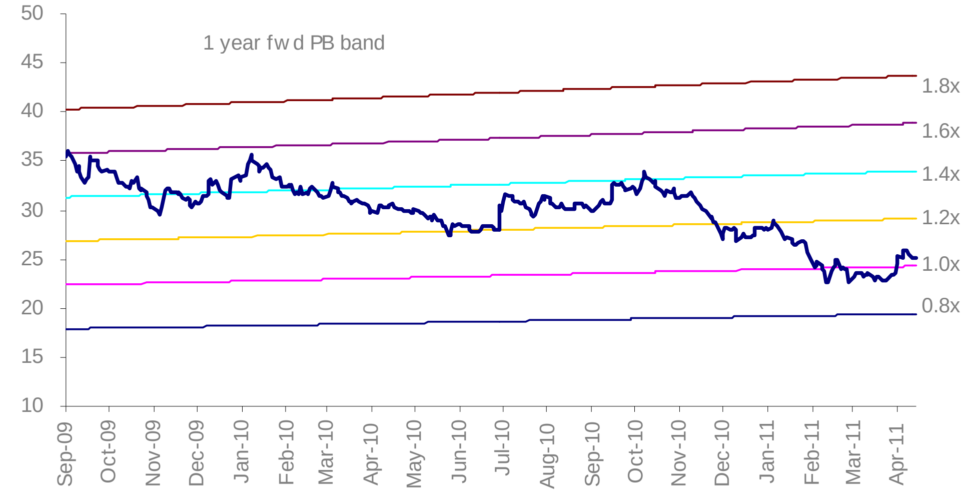
While CERC is yet to issue any such directive, we think that considering the peak power deficit, there is scope for amendment in tariff regulations. Such changes, as and when implemented, would further enhance NHPC's core RoE. Timing and extent of benefits, however, remain too uncertain to forecast, in our view.

Risk-reward favourable; we upgrade stock to ADD

NHPC, since its listing, has underperformed the broader markets. Its underperformance in the past 12 months (~27%) has been particularly stark. In our view, the underperformance is primarily due to delays in capacity addition and the resultant drag on earnings growth. Going forward, we reckon capacity and earnings will register double-digit earnings growth through FY11-13ii, even after building in highly conservative assumptions. As such, the stock is poised for a re-rating, in our view.

The stock is trading at an inexpensive 1x consolidated FY12ii BV. Based on the P/BV model, the stock's valuation prices in earnings growth of 3.4%, significantly lower than NTPC's (Figure 11). We think the risk-reward is favourable, and the current valuation adequately prices in concerns on execution. We upgrade the stock to ADD.

Figure 10: NHPC trading at lowest P/BV multiple since listing



Source: IIFL Research

Figure 11: On P/BV model, NHPC prices in only 3.4% implied long-term growth

FY12ii	NTPC	NHPC
CoE	12%	12%
FY12 core P/BV	3.3	1.5
Core RoE - FY12	24.0%	16.0%
Implied growth rate	6.9%	3.4%

Source: Company, IIFL Research

Assumptions

	FY09A	FY10A	FY11	FY12ii	FY13ii
Capacity addition (MW)	46	-	120	221	1,151
RoE (%)			15.5%	15.5%	15.5%
Availability (%)		83%	83%	83%	84%
UI Income (Rs m)	1,000	1,560	1,000	1,250	1,500

Annexure: Tariff determination for hydro project

Component of AFC	2009 - 2014
Return on equity	Post tax 15.5% (an additional 0.5% for timely completion)
Depreciation	4.5-5%
O&M expenses	1) Actual O&M for the period FY04-08 (existing plants) or 2) 2% of project cost excluding rehabilitation expenses (new plants); with a 5.72% escalation per year
Maintenance spares	15% of O&M expenses
Rate of interest in case of under-recovery	SBI PLR
Incentives	Generation beyond the design energy level as well as for PLF beyond normative levels
Secondary energy rate	Capped at Rs0.8/unit

Tariffs of hydroelectric power plants are determined on the basis of guidelines issued by the regulatory commission. In case of central utilities, the tariffs are determined by CERC. Tariff for a hydro project consist of an annual fixed charge (AFC), which comprises energy charges and capacity charges. Station-wise tariffs are determined by CERC in accordance with tariff regulations applicable for that tariff period.

The company recovers annual fixed cost (AFC) from the beneficiaries. AFC consists of: 1) a pre-specified return on equity (RoE); 2) interest on loan; 3) depreciation; 4) interest on working loan; and 5) operation and maintenance expenses (O&M expense). See the table above for details.

Formulae for computation of capacity charge (CC) (inclusive of incentives) and energy charge (EC):

- CC = AFC * 0.5 * (Plant availability factor / normative plant factor)
- EC = AFC * 0.5 *10 / {design energy * (100 – aux) * (100 – free power to home state)}

As per the current regulation, hydrological risk (risk of non-generation due to inadequate water availability) is to be shared equally between the generator and the end-user. CERC has prescribed a normative plant availability index for each plant, and this is in turn derived from the past 10 years' actual generation data. Further, recovery of fixed costs is divided into two equal parts: 50% linked to actual plant availability, and the rest linked to actual generation, which is to be recovered on a pro-rata basis. Hence, if actual generation from a plant is less than the normative level (or design energy), the generator would not be able to recover the fixed charges. In a way, recovery of fixed costs has been linked to fuel availability.

Financial summary

Income statement summary (Rs m)

Y/e 31 Mar	FY09A	FY10ii	FY11ii	FY12ii	FY13ii
Revenue	34,142	45,773	48,084	51,693	59,052
EBITDA	23,243	34,790	34,074	37,928	44,757
EBIT	**16,680**	**21,962**	**25,108**	**28,271**	**33,265**
Interest income	5,578	6,473	7,018	5,842	5,610
Interest expense	7,760	7,394	7,263	7,652	8,571
Exceptional items	-916	6,500	0	0	0
Profit before tax	**13,582**	**27,542**	**24,863**	**26,461**	**30,305**
Taxes	1,678	4,766	4,660	4,793	5,496
Minorities and other	-1,507	-1,020	-1,674	-1,674	-1,674
Net profit	**10,397**	**21,756**	**18,529**	**19,993**	**23,135**

Cash flow summary (Rs m)

Y/e 31 Mar	FY09A	FY10ii	FY11ii	FY12ii	FY13ii
Profit before tax	13,582	27,542	24,863	26,461	30,305
Depr. & amortization	6,563	12,827	8,966	9,657	11,492
Tax paid	1,678	4,766	4,660	4,793	5,496
Working capital Δ	1,846	1,486	-1,116	1,370	-959
Other operating items	-3,983	0	-10,704	-11,550	-13,365
Operating cashflow	16,330	37,089	17,349	21,143	21,976
Capital expenditure	-40,024	-35,384	-32,853	-32,800	-72,060
Free cash flow	**-23,694**	**1,705**	**-15,504**	**-11,657**	**-50,084**
Equity raised	0	44,659	0	0	0
Investments	2,556	-17,370	1,827	0	0
Debt financing/disposal	21,979	3,453	17,789	13,821	49,841
Dividends paid	3,268	4,407	5,352	5,775	6,683
Other items	-1,507	-1,020	-1,674	-1,674	-1,674
Net change in cash	**2,602**	**35,835**	**7,789**	**6,266**	**4,766**

Source: Company data, IIFL Research

Balance sheet summary (Rs m)

Y/e 31 Mar	FY09A	FY10ii	FY11ii	FY12ii	FY13ii
Cash & equivalents	26,061	61,895	69,684	75,950	80,716
Sundry debtors	8,446	15,338	13,988	15,645	14,485
Inventories - trade	611	483	441	493	457
Other current assets	17,156	18,847	17,188	19,225	17,799
Fixed assets	**341,348**	**363,904**	**387,791**	**410,935**	**471,503**
Intangible assets					
Other term assets	17,912	35,282	33,455	33,455	33,455
Total assets	**411,533**	**495,749**	**522,548**	**555,704**	**618,415**
Sundry creditors	37,406	47,347	43,181	48,297	44,716
Other current liabs	0	0	0	0	0
Long-term debt/CBs	161,290	163,515	181,304	195,125	244,966
Minorities/other equity	14,667	15,895	15,895	15,895	15,895
Net worth	**198,170**	**268,992**	**282,168**	**296,386**	**312,839**
Total liabs & equity	**411,533**	**495,749**	**522,548**	**555,704**	**618,415**

Ratio analysis

Y/e 31 Mar	FY09A	FY10ii	FY11ii	FY12ii	FY13ii
Revenue growth (%)	16.5	34.1	5.0	7.5	14.2
Op Ebitda growth (%)	1.3	49.7	-2.1	11.3	18.0
Op Ebit growth (%)	-3.8	31.7	14.3	12.6	17.7
Op Ebitda margin (%)	68.1	76.0	70.9	73.4	75.8
Op Ebit margin (%)	48.9	48.0	52.2	54.7	56.3
Net profit margin (%)	33.1	33.3	38.5	38.7	39.2
Tax rate (%)	12.4	17.3	18.7	18.1	18.1
Net debt/equity (%)	68.2	37.8	39.6	40.2	52.5
Return on equity (%)	5.2	8.1	6.6	6.7	7.4
Return on assets (%)	2.7	3.1	3.5	3.6	3.7

Source: Company data, IIFL Research

Key to our recommendation structure

BUY - Absolute - Stock expected to give a positive return of over 20% over a 1-year horizon.
SELL - Absolute - Stock expected to fall by more than 10% over a 1-year horizon.

In addition, **Add** and **Reduce** recommendations are based on expected returns relative to a hurdle rate. Investment horizon for **Add** and **Reduce** recommendations is up to a year. We assume the current hurdle rate at 10%, this being the average return on a debt instrument available for investment.

Add - Stock expected to give a return of 0-10% over the hurdle rate, ie a positive return of 10%+.
Reduce - Stock expected to return less than the hurdle rate, ie return of less than 10%.

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