Reliance Industries

In a league of its own

Buy

Rs 2,071

We rate RIL a Buy on the back of its large E&P reserves, resilient petrochem margins (on account of gas-based capacity) and the potential for its refining margins to outperform Singapore complex margins. We initiate with a Buy and an SOTP-based target price of Rs 2,623.

- **E&P is the biggest value creator**
  Declared reserves reflect just 18 of RIL's 38 domestic discoveries. We believe the balance reserves justify the potential upside of Rs 1,227 billion built into our valuation of Rs 3,606 billion. The latest restructuring of the KG-D6 holding is positive, and will provide funding flexibility, ring-fence RIL from risks, and provide a benchmark for valuation with opportunity to unlock value.
- **Petrochemical cycle down, but gas-based capacity to offer resilience**
  The petrochemicals cycle is down. However, RIL's significant gas-based capacity leverages the vastly superior economics of these plants vis-à-vis naphtha-based ones. Its fully integrated PVC plant too should contribute to earnings and the planned off-gas-based petrochem plant will be a huge value creator, given its huge feedstock cost advantage (about 0.4x naphtha).
- **Refining is down, but Indian players, especially RIL, better off**
  Global refining margins are headed south, but the middle distillate heavy Indian players, especially RIL, should outperform Singapore complex in the next 12–18 months, with coke gasification and premium on Euro IV and V fuels supporting the company's margins.

Figure 1: Key financials

Units as shown

As on 31 March	FY07E	FY08E	FY09E	FY10E
Net sales (Rs m)	1,137,701	1,371,467	1,882,919	2,043,931
Adj. net profit (Rs m)	120,747	195,214	184,069	245,418
Shares in issue (m)	1,453	1,453	1,573	1,573
Adj. EPS (Rs)	83.1	134.3	117.0	156.0
% growth	22.0	61.7	(12.9)	33.3
P/E (x)	24.9	15.4	17.7	13.3
P/BV (x)	4.2	3.4	2.6	2.2
EV/EBITDA (x)	16.7	15.2	14.0	10.1
ROE (%)	19.6	24.2	17.2	18.1
ROCE (%)	15.9	13.9	13.2	15.2

Source: Company data, Reliance Equities estimates.
Note: Priced at close of business 28 August 2008.

Target price: Rs 2,623

Oil & Gas

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Bloomberg code	RIL IN
Reuters code	RELI.BO
Avg. traded value (Rs m)	11.17
52-wk H/L (Rs)	3298/1845
Sensex	14048
MCap (US$bn/Rsbn)	68.9/3010

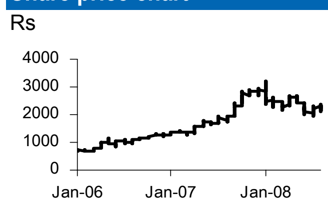
Shareholding (%)

	06/08	03/08
Promoters	53.47	53.35
MFs, FIs, banks	2.93	2.84
FIIs	17.81	18.51
Others	25.79	25.3

Stock performance (%)

	1m	6m	1yr
Absolute	(1.4)	(13.6)	8.9
Rel. to Sensex	(3.3)	4.4	13.9

Share price chart



Source: Bloomberg.

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E&P: Biggest value creator

Outstanding exploration performance

Despite being a relative newcomer, with an E&P foray that started only in 2001, Reliance Industries Limited (RIL)'s exploration success record is outstanding. It has 42 discoveries to date: 38 domestic and four overseas. The company's overall success rate is 63% (including appraisal wells). Most of its discoveries are in the deep sea, and, globally, deep-sea success ratios of about 50% are considered quite high.

Figure 2: Discoveries as of June 2008

Block	Number of discoveries
KG-D6	19
NEC-25	8
Yemen- Block 9	4
KG III 5	3
KG-D3	2
KG-III 6	2
SR 01	1
GS 01	1
CY IIID5	1
KG-D4	1
Total	**42**

Source: Company data.

Figure 3: RIL E&P drilling progress

Particulars	Drilled	Success	Success ratio (%)
Deep water- D6	24	18	86
Deep water- Others	9	4	44
Shallow water	21	16	76
Relinquished	9	0	0
Total		38	63

Source: Company data.

Reserves: What should the valuation reflect?

Valuation of E&P assets has always remained challenging on account of the timing of discounting the discoveries, especially so in the case of RIL due to its large number of discoveries in a short period of time. What reserve base the stock price should reflect, is probably a US$30 billion question, given most analysts' expectations of the value of potential reserve upsides. The choice is between:

- Reserves reflected in the balance sheet, which is the most reliable and normally the most conservative estimate.
- Reserves information available from reliable sources—statements by company officials, private assessments by consultants and JV partners' assessments.
- Reserves along with potential upsides from discoveries, before appraisal. The estimates could vary significantly from the final reserves, post appraisal.
- Finally, reserves with upside from discoveries along with upside for exploration blocks. Potential upsides as indicated by assessment of un-drilled prospects could vary considerably from the post-drilling evaluations. Additionally, geological surprises could make drilling impossible, making the oil/gas accumulations unreachable.

FY07 balance sheet reflects reserves of just 4.4 billion boe

RIL's FY07 balance sheet reflects a 2P gross (recoverable) reserve of 4.4 billion barrels of oil equivalent (boe), reflecting just the KG-D6, NEC-25, PMT and Yemen reserves. (The latest balance sheet has moved to 1P and is hence not comparable; the latest 2P indicated by management is over 5 billion boe.) We understand the KG and NEC reserves correspond to 18 discoveries of predominantly gas reserves, aggregating 25.5 trillion cubic feet (tcf) of gross in-place reserves.

Figure 4: RIL reserves upside potential

Reserves reflected in balance sheet	Reserves available from reliable sources	Potential upside
• 4.4bn boe – Factor in KG-D6, NEC-25, PMT and Yemen • Incl. 18 discoveries in KG and NEC with gross in-place reserves of 25.5tcf	Additional reserves from: • Sohagpur CBM blocks - 3.65tcf • KG oil potential - 1.6bn bls of in-place reserves • Sonhat – 1.5tcf	• 20 domestic discoveries •Yemen discoveries (new) • Prospective blocks - KG-D4, D3, D9, Cauvery, KG III 5 and 6, MN D4, etc.

Source: Reliance Equities research.

Over and above the reserve numbers indicated in the FY07 balance sheet, we build in the values of coal bed methane (CBM) discoveries, reserve estimates for which have been officially announced by the RIL and the KG oil discovery, as indicated by management, as part of the valuation of declared reserves.

Market is building in a large expectation value

Over and above the valuation of these established reserves, an expectation value is built into analyst target prices to reflect the expected upside potential from the numerous discoveries whose reserves are yet to be finalised.

We believe it is fair to build in an option/expectation value for discoveries, if a workable estimate for the reserves is available, given the time lag between a discovery and the finalisation of reserves (which is essentially approval of the field development plan, i.e., FDP, or independent certification of reserves). We also believe that the expectation value could be built in even for some exploration blocks, if a reasonable amount of data indicates the presence of hydrocarbons in commercial quantities, though this may be a bit hazardous given that the value could be off the mark by a fair margin.

Number of discoveries and high potential blocks justify value

To date, RIL has 42 discoveries to its name (excluding the CBM blocks), but it accounts for reserves corresponding to just 18 domestic discoveries (out of 38!), along with Yemen oil, in its balance sheet. Our valuation of established reserves incrementally includes the MA oil discovery in KG-D6. Our total expectation value of Rs 1,227 billion, corresponds to additional reserves of 11.5 billion boe or some 65tcf of recoverable reserves, not adjusting for the time value.

While the expectation value built in might appear stretched, we believe the additional domestic discoveries (numbering 20, out of a total of 38, with 18 already forming part of the declared reserves), along with undrilled prospects in discovered blocks and the potentially high number of blocks such as KG-D9, MN-D4 and Cauvery, will likely help achieve our target price.

KG-D6 (RIL stake of 90%): The crown jewel

Established 2P in-place reserves of 23.2tcf in this block (KG-DWN-98/3) reflect just 12 discoveries, while the latest number of discoveries in the block stands at 19 (including the MA oil discovery). RIL's FDP had identified additional prospects which could hold about 39tcf in-place (almost half of the expectation value built in by us) of additional reserves. We believe this will probably be distributed across the undrilled prospects and the seven gas discoveries whose reserves are yet to be declared.

RIL is currently developing the D1 and D3 discoveries, along with the MA oil discovery (which is a fast-track development to coincide with D1 and D3). The company expects first gas in 2H FY09, ramping-up to 80 million standard cubic metres per day (mmscmd) of plateau production. Initial development expenditure is expected to be US$5.2 billion, while capex over the life of the asset is estimated at US$8.8 billion. However, Niko's (10% stakeholder in the block) investor brief indicates the development would create infrastructure to handle 120mmscmd so as to minimize capex for subsequent modules. This also reflects the potential of the block in terms of reserve size. Oil production is likely to plateau at about 40,000bpd. About 9mmscmd of gas production from the MA discovery too is scheduled, though initial availability for sale would be low to maximise oil production, according to the company. Indications are that by FY13–14, production would reach 120mmscmd, as RIL plans to tie-in nine satellite discoveries into the D1 and D3 development. The FDP for the same has been filed with the Directorate General of Hydrocarbons (DGH).

Figure 5: Gaffney, Cline & Associates' (GCA) reserves estimates

Trillion cubic feet

						OGIP basis for est. of resources			Total OGIP basis for reserves and resources		
Fiscal year	**Evaluator**	**Fields**	**1P tcf**	**2P tcf**	**3P tcf**	**Low tcf**	**Best tcf**	**High tcf**	**1P plus Low tcf**	**2P plus Best tcf**	**3P plus High tcf**
FY05	D&M	A,B,C,D,E,F,G,H,K,M	2,936	7,900	11,861				2,935	7,900	11,861
		Total	2,935	7,900	11,861				2,935	7,900	11,861
FY06	GCA	A,B	5,716	18,798	27,198				5,716	18,798	27,198
		C,D,E,F,G,H,I,J,K,M,S,H				1,233	4,448	8,188	1,233	4,448	8,188
		Total	**5,716**	**18,798**	**27,198**	**1,233**	**4,448**	**8,188**	**6,949**	**23,246**	**36,386**

Source: Niko Resources.
Note: OGIP = Original gas in place.

NEC-25 (RIL stake, 90%): Discovery that upgraded the basin

RIL has declared 2.35tcf of 2P in-place reserves in this Mahanadi block (NEC-OSN-97/2) on the back of six discoveries. The block now has eight discoveries, with the two additional discoveries set to add to the reserve base. The commerciality of the first six discoveries has been approved and the company has submitted an initial development plan to the DGH, with first gas production scheduled for FY12 and peak production of 6.5mmscmd. The latest discovery is reported to be highly encouraging, indicating potential in undrilled acreage.

Figure 6: GCA reserves estimates for NEC-25

Trillion cubic feet

Fiscal year	**Categories**	**1P tcf**	**2P tcf**	**3P tcf**	**Low tcf**	**Best tcf**	**High tcf**	**1P plus Low tcf**	**2P plus Best tcf**	**3P plus High tcf**
FY05	Drilled discoveries				0.800	2.300	5.500	0.800	2.300	5.5001
	Undrilled prospects				1.000	1.400	2.700	1.000	1.400	2.700
	Total				**1.800**	**3.700**	**8.200**	**1.800**	**3.700**	**8.200**

Source: Niko Resources.

CY-III-D5 (RIL stake, 100%): High-profile gas discovery

A rather high profile oil and gas discovery in the very first well in this deepwater block (CY-DWN-2001/2) in the Cauvery basin has raised investor expectations, with the media comparing it to KG-D6 in terms of prospects. The second well turned out to be dry, but the block is considered to be a great prospect, given the discovery in the first well at a water depth of 1,185mts returning 150mts of a hydrocarbon column in the Cretaceous section.

MN-D4 (RIL stake, 85%): Has Niko highly excited
The multiple fan structure returned by the seismic survey interpretation for this block (MN-DWN-2003/1) has got Niko, the 15% stake holder, all excited about the prospects of the block, leading to an inevitable comparison with KG-D6. Based on the analysis of the 2,365km 2D seismic acquisition programme, a further 2,800km 2D seismic programme and a 3,600sq km 3D seismic programme have been designed and are scheduled to be acquired in 2008. Initial drilling locations will be selected once the new seismic data is processed and interpreted.

KG-D9 and KG-D3 (Reliance stake, 90%): Hardy's data indicates large potential
KG-D9 (KG-DWN-2001/1): RIL has carried out hydrocarbon seep studies, seabed coring, an electromagnetic survey, gravity and magnetic modelling and basin modelling. Leads at upper Miocene, middle Miocene and Oligocene were identified, based on an irregular reconnaissance 2D seismic grid. UK-based international consultancy firm GCA's report to Hardy Oil (a 10% partner) after studying the data indicates large leads with prospective resources running into several trillion cubic feet.

Figure 7: KG-D9 gas initially in place (GIIP) and prospective resources summary (tcf)

Lead	GIIP	Gross gas prospective resource best est.	GCoS (%)
Upper Miocene	18	13	15
Middle Miocene	27	19	15
Oligocene	19	13	15

Source: Hardy Oil.
Note: 'GCoS' stands for Geologic Chance of Success (GCoS).

KG-D3 (KG-DWN-2003/1): RIL has announced two gas discoveries in the block over the last six months named Dhirubhai 39 and Dhirubhai 41. Before the discoveries, based on the seismic data, GCA's report to Hardy Oil suggests several leads with modest prospective resources. Though, on the face of it, there is lower potential compared to KG-D9, it is still an exciting prospect as indicated by Hardy Oil.

Figure 8: KG-D3 GIIP and prospective resource summary (tcf)

Prospect	Horizon	GIIP
KG D-1	Upper / Middle Miocene	102
KG D-2	Middle Miocene	162
KG D-3	Middle Miocene	94
KG D-11	Miocene	204
KG D-12	Eocene	25

Source: Hardy Oil.

KG-D4 (Reliance stake, 100%): First pure oil block
KG-D4 (KG-DWN-98/1) is the first block in the KG basin where RIL has struck oil (the MA oil discovery lies essentially in the KG-D6 gas field). The well is located at a water depth of 565m and was drilled to a target depth of 3,595m. The well encountered clastic reservoir with a gross oil column of more than 20 metres in the Mesozoic section.

KG-III-5 (Reliance stake, 100%): Striking gas

RIL recently struck gas in its third discovery in the shallow water block (KG-OSN-2001/1). The well KG-III-05-J1 was drilled at a water depth of 151m and to a total depth of 2,820m. During the drilling, a clastic reservoir was encountered with a gross hydrocarbon column of around 105m in the Miocene section.

Realisation of reserve upside: Rig arrival is critical

Rig availability is a key bottleneck, especially for the deepwater rigs. Hence, the arrival of rigs is crucial to realising reserve upsides. Reliance has contracted seven new rigs, six of them deepwater. The company expects these to be delivered over the next 12–18 months. Three deepwater rigs are expected in FY09 which would accelerate drilling. The timely arrival of the rigs is likely to ensure continued positive news flow on the E&P front.

E&P restructuring and value unlocking

RIL has DGH approval to move its 80% stake in KG-D6 (it holds a 90% stake in the block) to four (yet to be formed) wholly-owned subsidiaries. We believe this would offer some advantages and flexibility with regard to funding, ring-fencing some of the risks and the possible sale of some stake.

One of the key issues with KG-D6, in case the courts enforce performance of NTPC and RIL contracts, is the virtually unlimited liability in case of non-performance of the contract (it is unclear if force majeure exempts RIL from such liability, or it covers non-performance, including on account of force majeure events). This could have a couple of consequences: (1) funding issues with banks; and (2) a possible impact on RIL’s credit rating.

We believe the restructuring will involve some stake sale and thus largely mitigate the above risks. For example, there could be a stake sale creating a JV holding 20% of the stake in KG-D6. This would mean additional funds, which would reduce the debt funding requirement and, second, ring-fence the risk from flowing back to RIL, thus not affecting its credit rating.

A stake sale would also provide a valuation benchmark for the block, offering a better estimate for the reserve upside expected from the block compared to the expectations built in by analysts. We believe a sale would also be a value-unlocking opportunity, if it is at a significantly higher price than what is currently built in by analysts for the block.

Some investors have expressed concerns about uncertainties such as implications for minority shareholders and minimum alternate tax (MAT) becoming applicable on account of such restructuring. However, we believe that as long as the subsidiary remains wholly owned, no MAT would apply. About the first concern, we believe there would be no change on account of the restructuring.

Petrochemicals: Superior profitability warrants valuation premium

Petrochemical cycle: The ‘golden period’ is almost over

The petrochemical cycle’s peak has lasted over an unprecedented three years, leading industry participants to call it the ‘golden period’ of petrochemical margins. However, the party is about to end, in our view. Large capacity additions are set to drive operating rates down, taking margins down with them. High feedstock cost and the demand slowdown, due to the lower economic growth being witnessed, should worsen the situation in the near term. Petrochemical products are highly sensitive to prices and economic growth.

However, the downturn will not be a surprise

The petrochemical cycle downturn was expected, as the large scheduled capacity addition was widely acknowledged. However, what could surprise is the extent of fall in margins, as this is a function of the actual capacity coming online, which is likely to vary due to slippages. The polyester price, which was expected to improve on account of robust demand growth as well as a slowdown in Chinese capacity additions, could spring a negative surprise as weaker demand could delay the upswing.

Large capacity additions on the anvil: Ethylene chain and aromatics headed down

Large capacities of ethylene are scheduled to be added from 1Q CY09, triggering the petrochemical cycle downturn. Estimates of the exact quantum of scheduled capacity addition in CY09 vary from 9 million to 16 million tons, on account of varying estimates of slippages. Either way, we believe the additions will be too big for incremental demand to absorb. Incremental demand is expected to range from 5 million to 6 million tons based on trend-line demand growth (of 5.5-6.5%). The Middle East, especially Saudi Arabia and Iran, dominates the scheduled capacity addition. The two countries have seen significant slippages in commissioning, especially Iran, thanks to the embargo relating to its alleged nuclear ambitions. A couple of projects in China too have faced delays due to JV-related issues. These slippages were mainly responsible for a delay in the petrochemical cycle downturn.

The story is similar for propylene, where over 8 million tons of new capacity scheduled for CY09 is set to ring in the downturn. Trend-line demand growth would be similar to ethylene, at about 4 million tons, once again well short of the scheduled capacity addition, even after providing for slippage. PVC too is set for a similar pattern.

Petrochem demand-supply

Polyester intermediates, pure terephthalic acid (PTA) and paraxylene (PX), are ahead of the ethylene curve this time. The down cycle has already set in, with margins taking a severe beating. PTA capacity additions over the past two years have exceeded demand. Most of the additions during this period happened in China, essentially backward integration from polyester. We believe the outlook for PTA is weak given the large additions scheduled in CY09 and CY10.

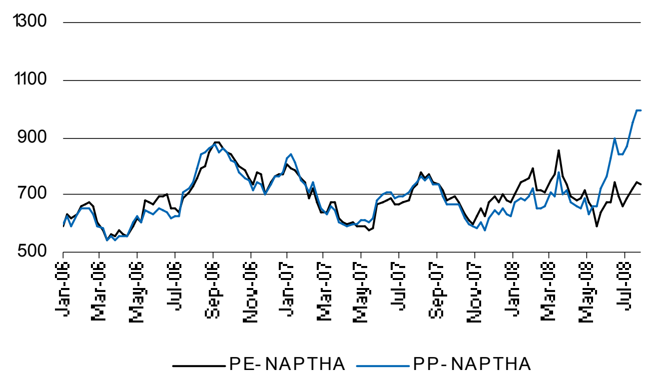
PX margins too have suffered due to large capacity additions of about 3 million tons p.a. over the past two years. Furthermore, bigger capacity additions are expected in CY09, especially in China, thus crystallising the demand-supply scenario. Monoethylene glycol (MEG) too has come off its peak, driven by the recent unplanned plant shutdown in the Middle East. With significant new capacity, MEG fundamentals also remain weak and are likely to follow those of PTA and PX, though we expect the downturn to be less severe.

Polyester promised to improve after a very bad phase, but weaker demand is likely to delay the upswing. Polyester and, to some extent the intermediates, have not followed the ethylene cycle mainly due to Chinese capacity additions. Anticipating major gains from the phase-out of the Multi-Fibre Agreement (MFA) (which had led to textile quotas), China has built huge polyester capacities over the past five years, leading to a large surplus in polyester. Operating rates in the country fell to about 50%, lowering margins to cash cost and occasionally further below. The intermediates rode this wave, as PTA and MEG capacity build-up lagged that of polyester. However, backward integration by large Chinese players, along with MEG capacity build-up from the Middle East over the past two years, has triggered the downturn in intermediates. Polyester operating rates and margins are looking up as new capacity additions have slowed to a trickle. However, further improvement could be delayed by the weaker global economic growth and continued high prices. While there is still hope given the sharp rise in cotton prices, which would drive some substitution, the demand side still appears uncertain.

Aromatics are set to follow the ethylene cycle. Benzene has enjoyed four years (2004-07) of record high margins (over naphtha). However, with China set to turn into a net exporter from being a net importer, the downturn has set in. Aromatic prices are down, even as naphtha has hit a record high recently. We expect the weakness to continue.

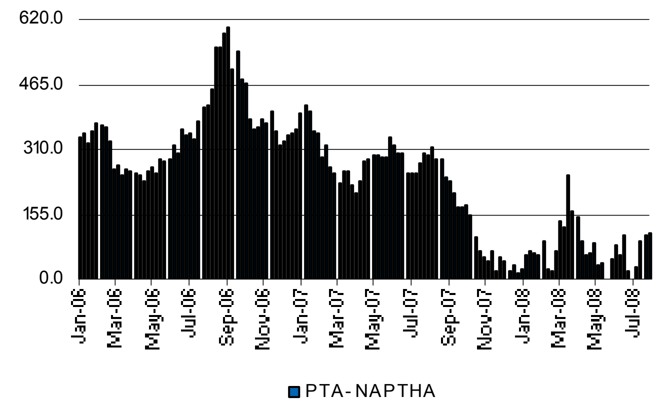
Petrochemical and polyester price movements

Figure 9: Polyethylene (PE) and polypropylene (PP) spreads over naphtha
US$/MT



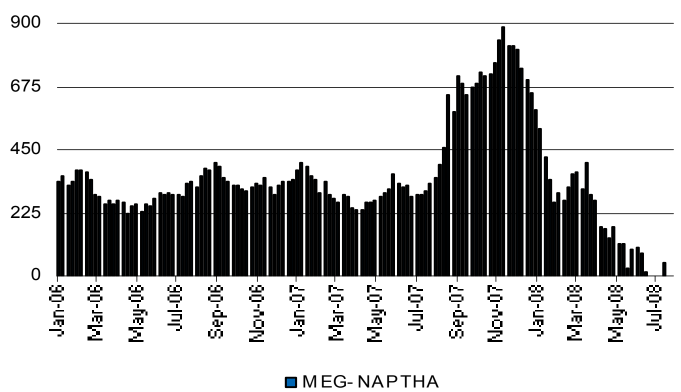
Source: Industry.

Figure 10: PTA and naphtha spread
US$/MT



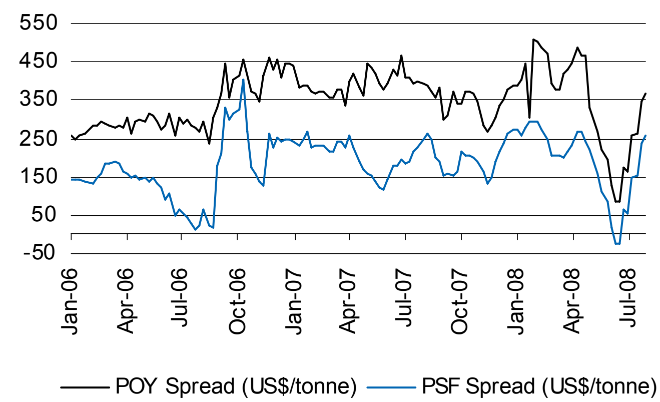
Source: Industry.

Figure 11: Monoethylene glycol (MEG)-naphtha spread
US$/MT



Source: Industry.

Figure 12: POY and PSF spreads
US$/tonne



Source: Industry.
Note: POY = partially oriented yarn; PSF = polyester staple fibre.

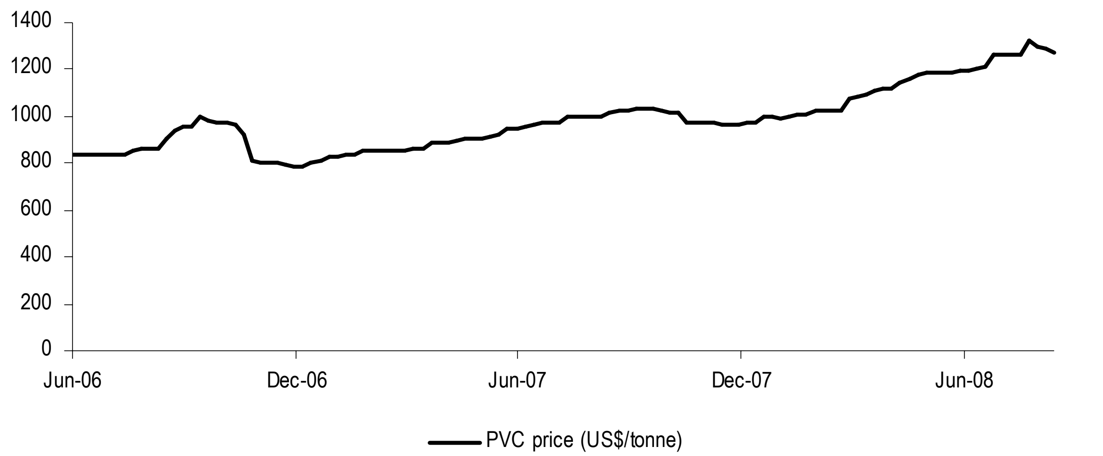
Gas-based plants enjoy superior margins: IPCL is a key beneficiary
Current high crude prices are significantly favourable for gas-based producers globally. Product prices (excluding aromatics and, to a smaller extent, ethylene and propylene) have broadly moved in line with crude prices, but gas prices have not moved up as much, resulting in vastly superior margins for gas-based crackers. Indian Petrochemicals (IPCL) is a key beneficiary of this trend. Indian gas prices have hardly moved, making domestic gas-based producers more profitable than their American counterparts, though the Middle East remains the most competitive. Indian C2 prices are linked to domestic gas prices, while C3 prices are linked to the international propane price.

We estimate IPCL's cracker profitability is 60% higher than that of naphtha-based crackers in the country. Over the past three years, IPCL has been consistently more profitable than its naphtha-based counterparts, with absolute profits hardly falling, in sharp contrast to naphtha-based crackers, which have faced a severe squeeze in margins lately. Aromatics, and to a smaller extent ethylene and propylene, are responsible for the squeeze in naphtha-based cracker profitability. Aromatics prices have corrected sharply, while those of ethylene and propylene have not moved up in line with naphtha (though polyethylene and polypropylene are better off). Gas-based crackers do not have aromatics in their product slate, while the sticky gas prices have ensured margins which are steady (less volatile) and vastly superior compared to their naphtha-based counterparts.

IPCL will also benefit from high polyvinyl chloride (PVC) prices, as it is a fully integrated player. PVC prices are at their highest in the last three-and-a-half years. IPCL should further benefit from some de-bottlenecking of cracker and PVC capacities, while the expected improvement in gas availability in 2H FY09 could result in full substitution of propane (supplementary feedstock due to gas shortage), leading to significant feedstock cost-savings. Improved availability would also remove the key constraint for capacity expansion, thus triggering capacity growth.

Figure 13: PVC price trend

US$/tonne



Source: Industry.

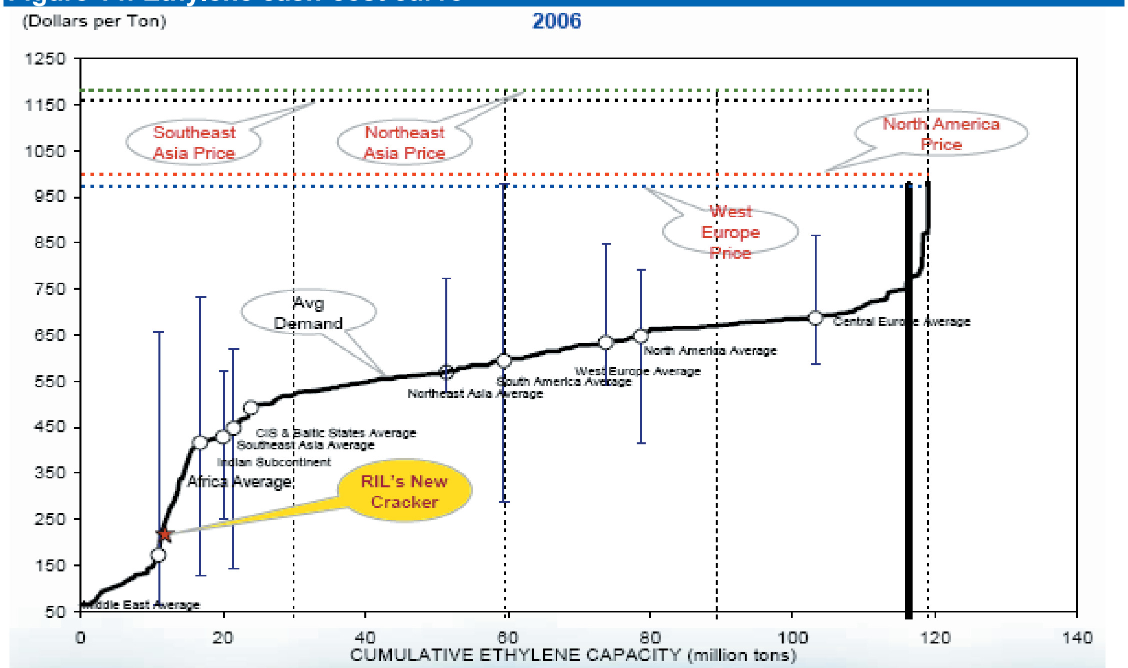
We estimate IPCL currently contributes over 30% of RIL's petrochemical EBITDA. This is set to go up further, as the petrochemical cycle downturn sets in decisively. We expect the profitability of gas-based producers to remain robust, given the crude price strength, while naphtha-based margins should fall. We believe crude prices are unlikely to fall below US$50/bbl, which roughly corresponds to the break-even for gas-based and naphtha-based players in India (thanks to the lower gas prices). Hence, we believe the margin superiority of gas-based producers is likely to continue for some time.

We believe this superiority deserves a valuation premium and hence we have applied a 6% premium in valuing RIL's petrochemical business.

Planned off-gas-based petrochem plant: Vastly superior economics
RIL is planning an off-gas-based petrochemical plant with a capacity of about 1.8 million tonnes per annum (tpa) of ethylene and 0.25 million tpa of propylene. When commissioned, this will be the single-largest train of ethylene globally. Downstream capacities are split between PE (1.4 million tpa) and MEG/EO (ethylene oxide) (700/200 ktpa) along with acrylic acid/acrylates (150 ktpa) and a small quantum of PP. The project also features an aromatic complex with 2.6 million tpa of PX and 2 million tpa of PTA in two phases, along with a bottle-grade polyethylene teraphthalate (PET) of 0.6 million tpa (in Phase II) from RPL's reformate.

The off-gas-based cracker would be among the most competitive globally, second only to cheap ethane-based Middle East players.

Figure 14: Ethylene cash-cost curve



Source: Company.

The feedstock would constitute refinery fuel gas, aromatics off-gas (ethane and propane rich), FCC off-gas (ethylene rich), coker off-gas (ethane rich) along with some supplemental propane. With a likely transfer price linked to the gas cost equivalent, the feedstock cost should be more competitive than that of domestic gas-based producers (arising out of the feedstock mix minimising by-products as well as probably a lower proportion of propane: about 15% for ethylene). At a crude price of about US$80/bbl, the feedstock cost is benchmarked at 0.4x that of naphtha, while domestic gas-based producers' feedstock cost would be at 0.6x that of naphtha (the benchmark attributed to IPCL). We believe that at the current crude price, off-gas would emerge even more competitive.

A back-of-the-envelope calculation, based on current prices and margins, indicates the EBITDA from the complex could be higher than RIL's current petrochemical EBITDA.

We believe this project would again warrant a significant valuation premium once commissioned (in FY12, according to the schedule).

Refining margins: Down, but resilient

The "dream run" for refining margins is about to end, in our view. However, we do not expect a crash in margins, but a gradual decline, driven by large capacity additions and refinery upgrades in a weakening demand growth scenario. Among products, we believe gasoline will be the key driver, while incrementally middle distillates (diesel, ATF/kerosene) spreads should soften from their highs. The fuel oil margin is likely to improve.

The likely impact on complex margins could be relatively high, thanks to the reversing of most of the key factors which took them to historic highs. In the near term, light-heavy crude price differentials are likely to correct, while transportation fuel spreads should weaken. A possible improvement in fuel oil spreads would not help, though a move to higher environmental norms could support margins to some extent. Having said that, we expect the long-term average margin to sustain at US$5.5/bbl as against the historic average of about US$4/bbl on account of the move to higher environmental norms and high capital costs of the new capacities and upgrades.

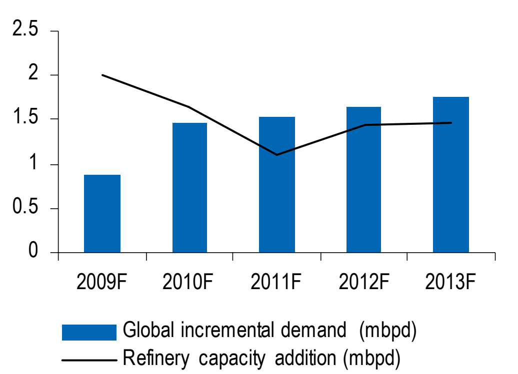
Indian players' margins are likely to outperform Singapore complex margins on account of their middle distillate heavy product slate. While middle distillate spreads are set to fall from their current high levels, we expect them to remain strong in the near term.

Capacity additions to exceed demand growth

The International Energy Agency (IEA) forecasts refining capacity addition of 1.1mbpd in 2008, 2mbpd in 2009 and 1.65mbpd in 2010. These capacity additions, especially in 2009 and 2010, are significantly higher than projected demand growth. Also, significant capacity upgrades are in the pipeline. China, the Middle East and India lead in capacity additions over the three years.

Figure 15: Refining capacity addition vs. incremental oil demand

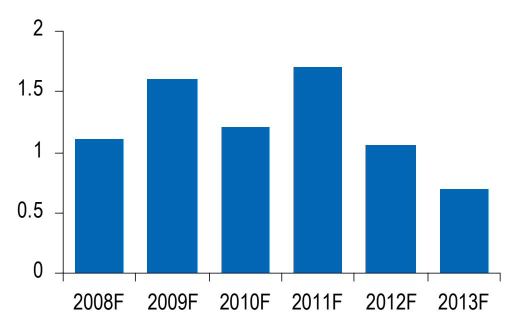
mbpd



Source: IEA.

Figure 16: Estimates of capacity upgrades

mbpd



Source: IEA.

Though the story is similar to that of oil, i.e., near-term demand growth is weak while capacity addition is front-ended, refining is better off. This is because: (1) incremental supply over demand is not very high; (2) potential slippage and normal gradual production ramp-up could restrict actual supply; and (3) there could be a phase-out or temporary shutdown of uneconomic refineries (especially old and small refineries needing upgrade to meet higher fuel norms).

We believe the incremental capacity addition over the next three years, though significant, is not too high. The capacity addition due in 2008 broadly matches the demand growth (with limited additional supply from Reliance Petroleum's Jamnagar refinery as it is due for commissioning in 4Q CY08), with significant surplus only in 2009. Possible slippages and normal production ramp-up could limit actual product supply. A phase-out of some small and old refineries located in regions where higher fuel norms would require them to upgrade is likely to reduce supply. It may be uneconomical to upgrade these refineries given their age and cost of upgrade. (The short residual life of existing old units makes upgrades unviable, though some of them could produce products for exports).

While visibility for near-term capacity additions is good, additions beyond 2012–13 could be impacted by high capital costs and weaker gasoline spreads, which could affect the feasibility of new projects.

Gasoline spreads to remain under pressure

Among the products, relatively strong growth in middle distillate demand and weaker gasoline demand growth are already reflected in their spreads. Estimated gasoline demand growth of hardly 1.1mbpd by 2013 (source: IEA) is rather weak, thanks to OECD demand weakness, especially in the US. Add to that the pipeline of new capacity/upgrade, which should keep gasoline spreads under pressure.

Diesel spreads to remain strong for a while

On the other hand, middle distillate spreads, though strong, could correct a bit, with new capacities coming online in 2010, not so much in 2009 due to strong demand growth and the capacities largely focusing on gasoline. OECD diesel demand growth will remain strong, unlike gasoline, while Asia, which largely consumes diesel, should continue to drive demand growth. We expect the commissioning of Reliance Petroleum (RPL)'s Jamnagar refinery to ease the tightness temporarily, till demand growth catches up.

Fuel oil spreads could improve

Fuel oil spreads, which have hit new lows in recent times, are likely to improve thanks to highly complex new capacities and refinery upgrades, reducing fuel oil output. The IEA expects supplies to fall by nearly 2mbpd by 2013 and demand to rise by 0.5mbpd, though prices would be critical for this scenario to play out.

Refining margins to come off the FY08 peak

Complex margins to be impacted most

On balance, we expect refining margins to correct, especially for complex refineries, though lower than the peaks seen in FY07 and FY08.

Figure 17: Our estimates for Singapore complex refining margins

US$/barrel	
FY08	US$7.6/bbl
FY09	US$6.0/bbl
FY10	US$5.5/bbl
Long term average	US$5.5/bbl (Historic average @US$4/bbl)

Source: Reliance Equities estimates.

We expect complex margins to be impacted the maximum, as most of the key drivers of their phenomenal rise over the last three years reverse. Distillate spreads, especially for gasoline, should remain weak, while fuel oil spreads could improve. Add to that the possible correction in the light-heavy differential in the near term on account of light crude capacity in the Middle East as well as OPEC's NGL and condensate output coming onstream, and complex margins appear set to correct. We estimate a long-term average refining margin of US$5.5/bbl, versus the historic average of US$4/bbl, as we expect higher fuel norms to sustain a higher refining margin. We do not see a significant surplus in refining over the next 5–7 years pushing margins close to cash cost levels any time soon, thereby keeping average margins higher. Also, downside support should come from higher capital costs of new refineries and the coming onstream of large capacity upgrades.

RIL to be better off

We expect RIL margins to outperform Singapore margins, though both should see a near-term downtrend. The outperformance drivers would be:

Middle distillate heavy product slate: Key variation from Singapore complex refiners
Middle distillates form about 46.8% of RIL's product slate, compared to a Singapore complex index weightage of just over 20%, allowing RIL to leverage the robust middle distillate product spreads, which we expect to sustain over the next 12–18 months. While spreads of middle distillates too should weaken from recent highs, we expect these to remain relatively strong, especially compared to gasoline.

Premium for higher-quality fuel
Most OECD countries, which are large consumers, are moving towards higher environmental norms requiring huge investment in hardware. We believe Euro IV and Euro V fuels will trade at a significant premium to normal fuels, supporting refining margins. Reports indicate a US$20–30/tonne premium for Euro IV and US$40–60/tonne for Euro V. This could translate into a GRM impact of US$0.5–2.5/bbl depending on the product slate.

Bottom upgrade and value addition to support RIL's GRM
RIL plans to gasify coke and use it internally, releasing the gases currently consumed for value addition in its planned off-gas-based petrochemical plant. The price of pet coke, which is linked to domestic coal, has not moved in line with that of crude, pulling down refining margins. The GRM gain by gasification, benchmarking the value of gas to domestic gas, would be between US$0.5/bbl and 0.75/bbl depending on the benchmarked gas price.

This would release refinery off-gases for value addition in a cracker. The off-gas-based petrochem plant is expected to be highly competitive, with a feedstock cost advantage of over 60% compared to naphtha. This is a huge value addition and, depending on the transfer price of gases, gains would be distributed between the refining and petrochem businesses.

Key investments

Retail business: Slow progress over the last few quarters

RIL currently operates about 735 stores in 70 cities with an area of 3.5 million sq ft across 12 different formats. However, progress over the last few quarters has been relatively slow. The possible reason could be expectations of a further fall in real estate rates, as RIL acquires real estate rather than leasing it out like most other players in the sector. Also, news reports indicate internal restructuring, which could have slowed new store launches.

We continue to believe that RIL will emerge as the largest player in the retail segment. However, given the relatively slow progress over the past few quarters and the long distance to the destination, we prefer valuing the business at a slight premium to book value.

RPL: All set to start production

Reliance Petroleum Limited (RPL) is all set to start production. News reports suggest that testing is already on. We expect commercial production to start by October 2008. RPL is a 70.1% subsidiary of RIL. The commissioning of the 29 million tpa refinery would make the location one of the largest refining hubs in the world. RPL's refinery is among the most complex at a Nelson complexity index of 14. The refinery is located in an SEZ having a five-year tax holiday and a further 50% tax benefit for the next five years. Also, any reinvestment of cash flows would be eligible for a 50% tax benefit.

We estimate RPL's equity value at Rs 643 billion based on DCF methodology. The implied value for RIL is Rs 456 billion or Rs 332 per share.

Building blocks for tomorrow

Creating significant value through new investments

We believe large cash flow from operations ranging between Rs 250 billion and Rs 300 billion from FY10 onwards (not adjusted for capex in the pipeline), should boost growth. RIL has traditionally been growth-focused and has generated superior return ratios. Potential investment in a new refinery at Jamnagar, most likely under RPL, could create significant value for RIL due to the tax benefits available to the first RPL refinery. Investment opportunities also exist in E&P, SEZ, city gas projects, besides some acquisition opportunities overseas. New investment avenues like semiconductors are opening up and appear highly attractive, especially with the government providing favourable financial incentives.

New refinery at Jamnagar: News reports indicate that RIL is considering the option of a brownfield refinery at Jamnagar of roughly 30 million tpa capacity, most probably under RPL. The refinery is likely to be eligible for tax benefits to plants situated in SEZs. India has some cost advantages over the Middle East (where most of the large new capacities are planned for FY12 commissioning) on account of lower wages; and availability of skilled manpower, local sub-contractors for project execution and local content in equipment. Moreover, RIL has specific advantages on account of its scale, proven execution record, ability to keep capex low and dedicated infrastructure to keep operating expenditure low.

Special Economic Zones (SEZs): RIL is in the process of developing two SEZs—one each in Haryana and Jamnagar. While the Jamnagar one would be a pure manufacturing SEZ, the Haryana one would be modelled on the Shenzhen economic zone in China, with facilities for companies in services, manufacturing and farm-based industries spread over 25,000 acres. RIL also plans to set up a cargo airport and a 2,000 MW power plant in the economic zone to serve the companies that set up ventures there. The company has signed a memorandum of understanding with Haryana State Industrial Development Corporation for setting up the multi-product SEZ. While we expect the SEZ to be a huge value creator, we have not assigned any value to it on account of the risks related to the current regulatory environment and the political opposition to SEZs across the country.

City gas distribution: RIL plans to set up city gas distribution networks across Karnataka, Gujarat, Tamil Nadu and West Bengal to utilise gas from the KG-D6 basin. The company proposes laying a city gas distribution network in about 62 cities across the country and has submitted an expression of interest (EoI).

Inorganic growth opportunity: RIL is also eyeing inorganic growth opportunities globally to consolidate its leadership position. Acquisition is one of the stated growth avenues for it.

Semiconductors: News reports indicate that RIL has submitted a proposal to the government for setting up two manufacturing facilities with an investment of Rs 300 billion under the government's scheme to promote semiconductor technology. Under the special incentive package scheme, the Union Government would provide incentives of 20% capital expenditure during the first 10 years for the units in special economic zones (SEZs) and 25% of the capital expenditure in non-SEZ units. We believe while the return ratios in the semiconductor space may not be very attractive, the incentives could make it attractive.

Valuation and investment view

Buy with an SOTP-based target price of Rs 2,623/share

We believe sum-of-the-parts (SOTP) methodology is the most appropriate to value RIL, given its diversified businesses, such as refining and petrochemicals, E&P and retail. Our SOTP-based valuation returns a base-case price target of Rs 2,623/share, implying potential upside of 27% and a P/E of 16.8x FY10E.

Refining and petrochemicals form the core: We estimate the EV of the refining and petrochemical business at Rs 432/share, based on a base-case EV/EBITDA of 8.3x. This is at a premium to global valuation multiples (based on Bloomberg estimates), in line with our argument for a valuation premium for RIL's petrochemical business.

E&P—large discoveries and prospects throw up a dilemma: The large number of discoveries for which reserve estimates are yet to be declared, along with the highly prospective blocks under exploration, make valuation of this business difficult. The market tends to discount forward, despite the huge uncertainty attached to the event, in this case the actual reserve. To obtain a valuation peg, we have assumed a potential reserve upside of 81tcf of in-place and 65tcf of recoverable reserves.

Retail: We value the retail business at US$3.2 billion, translating into Rs93/share, based on 0.5x FY12E sales after factoring in non-retail investments, i.e., the real estate. The bulk of RIL's investment in retail appears to have gone towards real estate, which we have valued at cost.

Reliance Petroleum: We value RPL at our DCF-based target price of Rs143/share, contributing Rs332/share to RIL's SOTP. RIL holds a 70.99% stake in RPL.

We also assign a value of US$1.5 billion, or Rs43/share, to the Hualon acquisition and an option value of Rs175/share to the off-gas-based petrochemical plant scheduled for commissioning in FY11–12. Hualon's valuation is a back-of-the-envelope replacement cost valuation, while the option value for the off-gas-based petrochemical plant is 25% of the EV/EBITDA-based valuation of the planned project.

We initiate coverage with a **Buy** recommendation and a target price of Rs 2,623/share—a potential upside of 27% from current levels.

Figure 18: Our SOTP valuation

Units as shown

Business	US$ bn	Rs bn	Rs/share	Comments
Petrochem	**13.7**	**594**	**432**	EV @ 8.3x FY10E EBITDA
Refining	**13.9**	**606**	**441**	EV @ 6.0x FY10E EBITDA
Investments - RPL	**10.5**	**456**	**332**	DCF-based target price of Rs 180
Hualon acquisition	**1.0**	**44**	**32**	Back-of-the-envelope replacement cost of assets
Retail	**3.0**	**128**	**93**	Retail valuation at 1.3x book
E&P valuation based on peak cashflow	**39.9**	**1738**	**1264**	
E&P: Established reserves	***11.7***	***511***	***451***	
KG - D6 gas reserve value (DCF based) (90% stake)	9.4	409	297	*Value of 23.2tcf at well head price of US$3.25/mmbtu*
Mahanadi basin : NEC-25 (2.35TCF-90% stake)	0.6	26	19	*Value of 2.35tcf based on KG*
				basin reserve (23.2tcf) valuation framework
CBM (3.65TCF-100% stake) Sohagpur	1.2	54	39	*Value of 3.65tcf at 20% premium to KG basin valuation*
CBM (1.5TCF) Sonhat	0.5	22	16	*Value of 1.5tcf at 20% premium to KG basin valuation*
PMT	0.8	37	27	*Value of 1.2tcf recoverable, @30% pmm to KG-D6*
KG basin oil discovery 1.6b bbls, in-place	1.7	73	53	*DCF-based, with similar terms as KG-D6 gas*
E&P: Embedded reserve upside	***28.2***	***1227***	***813***	*Translating into 65tcf of recoverable reserves*
Option value for off-gas based	5.5	241	175	*About 25% of new petrochem complex value*
petrochem plant, potential refinery expansion and other plants				
Net debt	**-4.6**	**-200**	**-145**	**FY10E**
Base case	**82.9**	**3606**	**2623**	**SOTP based on 1375m shares**

Source: Company data, Reliance Equities estimates.

Key risks to our investment view and price target

- **Potential delays in gas production at KG-D6:** Ongoing litigation has already closed the doors on a possible start-up close to the scheduled beginning date of 2H FY09. We believe December 2008 would be a realistic target, as indicated by news reports. However, MA oil production could start ahead of that schedule. Any delay beyond December 2008 in starting gas production would be a negative surprise and could adversely affect the stock performance, in our view.
- **Exchange rate:** A weaker rupee is normally good for RIL as the company's products are largely priced on an import parity basis. The possible strengthening of the rupee would be a risk.
- **Negative surprise on petrochemical margins:** While we expect petrochemical margins to fall, a sharp decline would be a negative surprise.
- **Refining margins:** Once again, while we are building in a decline in refining margins, we are still building in a relatively strong middle distillate spread. A possible sharp fall in middle distillate spreads would have a serious impact on Indian players' refining margins. We estimate a US$1/bbl change in GRMs impacts RIL earnings by Rs 8.9 billion or 4.6%.

Figure 19: Key financials

Rs million, year-end March

Income statement	FY07	FY08	FY09E	FY10E
Sales	**1,137,701**	**1,371,467**	**1,882,919**	**2,043,931**
Sales growth YoY (%)	37.0	20.5	37.3	8.6
EBITDA	**201,279**	**231,446**	**282,216**	**375,817**
EBITDA growth YoY (%)	40.3	15.0	21.9	33.2
Net interest	-12,323	-10,865	-23,492	-28,234
Depreciation	48,995	50,042	50,190	59,909
Pre-tax profit	**146,470**	**230,109**	**217,810**	**295,788**
Profit after tax	120,747	195,233	193,901	267,013
Net profit after non-recurring items	**120,747**	**195,214**	**184,069**	**245,418**
Net profit growth YoY (%)	27.2	61.7	-5.7	33.3
Cash flow	**FY07**	**FY08**	**FY09E**	**FY10E**
Pre-tax profit	146470.3	230108.8	217,810	295,788
Depreciation	48994.5	50042	50,190	59,909
Change in working capital	-34687.5	-106036	68,773	-5,646
Taxes paid	-16670.1	-26216.6	-22,990	-27,669
Cash flow from operations	**144,107**	**147,898**	**313,783**	**322,383**
Capital expenditure	-358,895	-264,378	-589,452	-72,583
Disposal/(acquisition) of investments	13,988	-42,548	-60,717	-50,000
Shares issue/(repurchase)	58,647	420	168,422	0
Dividends paid	-30,360	-19,085	-31,861	-37,171
Net debt	103,087	170,446	177,324	-160,022
Net change in cash	**-6,794**	**14,131**	**-23,532**	**1,306**
Balance sheet	**FY07**	**FY08**	**FY09E**	**FY10E**
Net fixed assets	941,463	1,139,452	1,654,737	1,667,410
Investments	52,680	95,229	155,946	205,946
Total current assets	331,159	514,889	560,512	581,769
Deferred tax assets	0	0	0	0
Other non-current assets	0	0	0	0
Working capital	128,643	246222	232515	255620
Total assets	**1,325,302**	**1,749,569**	**2,371,194**	**2,455,125**
Total debt	336,515	506,961	684,285	524,263
Deferred tax liabilities	69,905	77,983	69,905	69,905
Other current liabilities	0	0	41,194	57,153
Total liabilities	**608,936**	**853,611**	**1,123,381**	**977,471**
Reserves & surplus	668,213	840,538	1,177,775	1,386,022
Shareholders' equity	716,365	895,958	1,244,227	1,474,068
Total equity and liabilities and equity	**1,325,302**	**1,749,569**	**2,367,608**	**2,451,539**
Ratios	**FY07**	**FY08**	**FY09E**	**FY10E**
EBITDA margin (%)	17.7	16.9	15.0	18.4
EBIT margin (%)	13.4	13.2	12.3	15.5
PAT margin (%)	10.6	14.2	9.8	12.0
ROE (%)	19.6	24.2	17.2	18.1
ROCE (%)	15.9	13.9	13.2	15.2
Gearing (x)	0.5	0.6	0.5	0.4

Source: Company data, Reliance Equities estimates.

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