INDIA

Ranbaxy

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Inside

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Industry shaping role - again

We initiate coverage of Ranbaxy with an Outperform rating and a target price of **Rs470,** or ~ **28%** potential upside from the implied post-open offer price of Rs367. A strengthened business model following the deal to partner with Daiichi Sankyo (4568 JP, Yen2845, Not rated), steady growth in its base business and the stock's cheap valuation after adjusting for the open offer and exclusivity gains form the core of our investment thesis.

Exclusivity bonanza – like never before

Ranbaxy has improved the launch visibility of many of its first-to-file exclusivity products by settling with the drugs' innovators. We value Ranbaxy's FTF pipeline at **Rs123** per share, based on a probability-weighted DCF of the one-time profits.

Valuation – adjusted for FTF and open-offer compelling

Daiichi Sankyo, after acquiring promoter's stake, will acquire 20% of outstanding shares through an open-offer at Rs737. Assuming all tender shares, a 33% acceptance ratio and a 30% tax, this implies a post-open offer price of Rs367 per share.

Also adjusting for the value of FTF-exclusivity products (Rs123/share), Ranbaxy is trading at 9.6x FY10E earnings, almost a 37% discount to the large-cap peer PER.

If you can't beat them, join them

By locking in Daiichi Sankyo, Ranbaxy has further strengthened its business model. The deal provides a larger product basket to leverage globally, a strengthened balance sheet that can be used to participate in consolidation and an opportunity to capitalise on Daiichi Sankyo's strength as an innovator, which will help transform Ranbaxy into a speciality pharmaceutical firm.

Base business – steady growth and margin expansion

We forecast ~29% earnings growth for the base business, excluding FTF opportunities, between FY08–10E, driven primarily by increasing demand for generics globally, a changing market mix with higher emerging market sales, operating leverage and the launch of difficult to manufacture and value-added generics that would face limited competition and higher margins.

Risks – FDA and DoJ probes

The US FDA has been investigating Ranbaxy's Ponta manufacturing facility for three years, although existing products from this facility are still sold in the US. We believe that if it had concrete evidence of serious violations, the FDA would be unlikely to have allowed distribution of products to continue. Two hundred samples were tested by the FDA independently during the investigation, and all met the requisite specifications. Ranbaxy continues to receive approval from other manufacturing sites.

The US Department of Justice (DoJ) is requesting additional data, suggesting it is probing either a violation of good manufacturing practices, fabrication of test data or an effort to conceal data from the FDA. However, the company has still not been prosecuted, and we understand the DoJ is requesting an internal audit document that Ranbaxy used to strengthen its quality controls.

Ranbaxy is providing the entire audit document and says it should allay the DoJ's concerns. In our view, Daiichi Sankyo would likely not have proceeded with the deal if these documents proved serious malpractice.

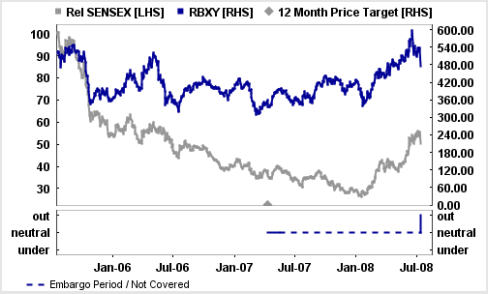
RBXY IN		**Outperform**
Stock price as of 22 Jul 08	Rs	463.00
12-month target	Rs	470.00
Upside/downside	%	+1.5
Valuation - Other	Rs	610.00

GICS sector	pharmaceuticals biotechnology & life sciences
Market cap	Rs m 213,906
30-day avg turnover	US$m 56.3
Market cap	US$m 5,005
Number shares on issue	m 462.0

Investment fundamentals

Year end 31 Dec		2007A	2008E	2009E	2010E
Total revenue	m	69,822	77,296	87,820	98,489
EBIT	m	6,964	8,022	10,559	13,090
EBIT Growth	%	1.5	15.2	31.6	24.0
Recurring profit	m	6,232	7,927	11,749	14,805
Reported profit	m	7,746	6,626	14,810	25,735
Adjusted profit	m	4,788	6,219	9,271	11,771
EPS rep	Rs	19.33	14.34	32.04	55.68
EPS rep growth	%	47.5	-25.8	123.5	73.8
EPS adj	Rs	11.95	13.46	20.06	25.47
EPS adj growth	%	-5.8	12.6	49.1	27.0
PE rep	x	24.0	32.3	14.4	8.3
PE adj	x	38.7	34.4	23.1	18.2
Total DPS	Rs	9.95	10.00	10.03	10.19
Total div yield	%	2.1	2.2	2.2	2.2
ROA	%	8.0	8.2	9.7	10.3
ROE	%	17.8	11.4	10.7	11.5
EV/EBITDA	x	21.6	23.4	18.7	15.3
Net debt/equity	%	129.5	-14.0	-18.1	-27.0
Price/book	x	6.6	2.6	2.3	1.9

RBXY IN rel SENSEX performance, & rec history



Source: Datastream, Macquarie Research, July 2008 (all figures in INR unless noted)

Ranbaxy Laboratories Ltd

Company profile

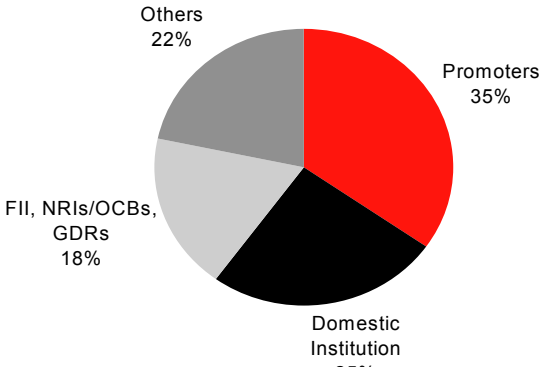
Ranbaxy is the largest pharmaceutical company in India in terms of sales, and overseas revenue contributed over 75% of sales in FY07. Ranbaxy has a presence in over 125 countries, ground operations in 49 and manufacturing operations in 11 nations. With its strong manufacturing capabilities, Ranbaxy has established itself as a producer of world-class generics.

Ranbaxy has pursued a strategy of geographical diversification over the years, with no single geography dominating its revenue line. North America, Europe and India contributed ~ 26%, 23% and 21%, respectively, of total revenue in FY07. On a broad level, emerging markets now contribute ~ 54% of its revenue, developed markets 40% and 'others' 6%.

Ranbaxy has allowed leading Japanese pharmaceutical firm Daiichi Sankyo to become a major shareholder. Daiichi Sankyo will acquire the entire 35% shareholding of the Promoter family prior to the deal and will seek to acquire a further 20% of total outstanding shares through an open offer at Rs737 per share.

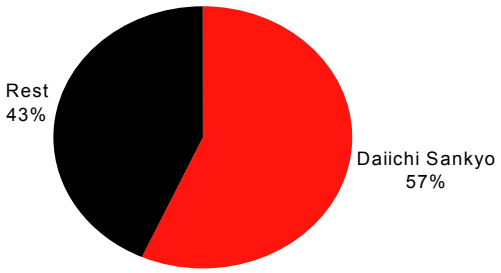
Prior to the deal, the Promoter Singh family owned 34.8% of the company, domestic institutions 23.3%, while an 18% stake was held by foreign institutional investors. Daiichi Sankyo will eventually hold more than 50% of the company.

Fig 1 Pre-deal shareholding pattern



Source: Macquarie Research, July 2008

Fig 2 Post-deal estimated shareholding pattern %



Assuming warrants are not exercised, FCCBs convert at Rs540, and open-offer is successful.
Source: Macquarie Research, July 2008

Industry shaping role - again

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Compelling valuation adjusted for FTF and open-offer gains

After adjusting for the value of the open offer (Rs96 per share) and FTF-exclusivity (Rs123 per share), we estimate that Ranbaxy is trading at 9.6 x FY10E earnings, at 37% discount to the sector PER average. We think this discount is unwarranted given its superior FY08–10E earnings growth profile of ~ 29% pa vs. an average of ~22% for its large-cap peer group.

Based on a sum-of-parts valuation, we derive a value of **Rs470** per share for Ranbaxy.

- We value the 180-day FTF-exclusivity upside at Rs123 per share based on probability-weighted DCF for the known one-time profits.
- We value the core business at Rs392 per share based on 15.4x FY10E earnings, in line with its large-cap peer average.

FDA probe risk assumption

In 2002, Schering-Plough payed a record penalty of US$500m to the FDA for violating the good manufacturing practise regulation. For a violation of the same code, a US$100m penalty was levied against Abbott in 1999. Ranbaxy, however, has still not been prosecuted for any violation, and the company believes the documents now being submitted will allay FDA and DoJ concerns.

In response to the market's concerns, we examine the impact of a Schering-like situation for Ranbaxy, and we impute an Rs45/share penalty payment risk provision in our target price calculation.

The current price adjusted for open offer (assuming 33% acceptance ratio and 30% tax rate) implies the stock is trading at Rs367 per share. Our target price implies ~ 28 % potential upside from here.

Fig 3 Target price scenario (Rs)

Sum of the parts valuation	**Base case**	**Worst case**	**Blue sky**	**Comments**
Recur. FY10 EPS	*25.5*	*20*	*29.0*	Target multiple in line with Indian front-line generic companies despite its superior earnings growth profile of 29% pa vs. a large cap peer average of 20%.
Target PER	*15.4x*	*15.4x*	*15.4x*	
Core business value (Rs)	**392**	**308**	**447**	
Para 4 FTF exclusivity NPV/share				
Imitrex	*4*	*4*	*4*	*Settled*
Valtrex	*12*	*12*	*12*	*Settled*
Flomax	*11*	*11*	*11*	*Settled*
Lipitor	*33*	*33*	*33*	*Settled*
Caduet US	*4*	*4*	*4*	*Settled*
Actos	*8*	*8*	*8*	*70% risk adjusted*
Diovan	*6*	*6*	*6*	*70% risk adjusted*
Nexium	*37*	*37*	*37*	*Settled*
Aricept	*6*	*6*	*6*	*50% risk adjusted*
Explicitly modelled Para 4 Value	**123**	**123**	**123**	
FDA probe risk assumption				
FDA penalty risk	-45	-45	0	- ***Base case scenario***, we examine the potential impact of a Schering-like situation for Ranbaxy and arrive at a Rs45 /share penalty payment risk provision. 1) Schering-Plough received the largest-ever FDA penalty of US$500m for violation of the GMP in 2002. 2) Albe Laboratories did not receive a penalty but was asked to refile all its ANDA from the manufacturing facility. - *In **the worst case** scenario we assume both happens:(ANDA refiling from Ponta sahib and penalty is imposed)* - ***Blue sky** scenario Ponta gets cleared in 2009 (no penalty)*
Target price	**470**	**385**	**570**	Synergies with Daiichi Sankyo are not reflected in our revenue model. We discuss them in detail in this report. As clarity starts to emerge, there may be upside to our numbers.

Source: Macquarie Research, July 2008

Exclusivity bonanza – like never before

First-to-file status in 18 ANDA's with total brand value sales of FTF opportunities close to US$27bn

We think Ranbaxy has one of the best monetised first-to-file (FTF) 180-day exclusivity pipelines in the industry, which we value separately at **Rs123** per share. Ranbaxy has FTF status in 18 ANDA's (abbreviated new drug applications), which have total brand value sales of ~US$27bn. Of these 18 FTF ANDA's, Ranbaxy has not been sued on 11 Para 4s and this could result in further settlement opportunities.

As a generic manufacturer, Ranbaxy employs a strategy of de-risking its FTF pipeline through a series of settlements with the innovator companies. This has improved the visibility of its launches. Settlements help: 1) lower the upfront litigation expense; 2) remove uncertainty with regard to the launch date; 3) lead to better planning of inventory, launch quantities and supply agreements; and 4) lower the risk of any damage payments later.

Ranbaxy has several exclusivity opportunities lined up in the US market, which we feel would benefit even the base business. Historically, the leading market share has been maintained by the generic player which launched the molecule with exclusivity, even after the expiry of 180 days.

This bodes well for Ranbaxy's base business as it has FTF exclusivity on products like Lipitor (lipid lowering), Nexium (GI), Actos (diabetes), and Valsartan (blood pressure), which are all products for lifestyle-related diseases and leaders in their respective therapeutic categories. Post-expiry we expect the market size by volume of these products will grow substantially, because of therapeutic substitution and an increase in prevalence of the various diseases.

Having a dominant market share in these products after 180 days would mean substantial recurring base business sales for Ranbaxy. As an example, for Lipitor alone we believe Ranbaxy could generate ~US$150m recurring sales post the expiry of the 180-day exclusivity due to reverse cannibalisation of other low efficacy generic statins like Simvastatin and Pravastatin and also branded Crestor by Lipitor.

Fig 4 First-to-file pipeline for Ranbaxy

	Incremental one time EPS (Rs)							NPV (Rs)	Comments
FTF Molecule	**FY08E**	**FY09E**	**FY10E**	**FY11E**	**FY12E**	**FY13E**	**FY14E**	**Per Share**	
Imitrex	0.8	3.9						4.2	Settled, Launch Dec-08
Valtrex		6.8	7.3					11.8	Settled, Launch Dec-09
Flomax			13.5					10.6	Settled, Launch Mar-10
Lipitor Franchise			2.0	8.7	47.4			37.3	Settled, Launch Dec-11
Diovan					6.5	3.3		5.9	70% risk adjusted
Actos				11.9				8.4	70% risk adjusted
Aricept			2.3	6.2				6.2	50% risk adjusted
Nexium Franchise	0.1	1.33	4.9	7.0	6.2	5.9	40.7	37.3	Settled, Launch May-14
Total	**0.9**	**12.0**	**30.0**	**33.9**	**60.1**	**9.2**	**40.7**	**123**	

Source: Macquarie Research, July 2008

If you can't beat them, join them

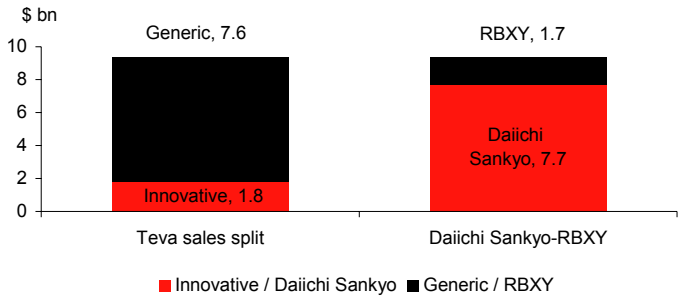
Daiichi Sankyo intends to acquire more than 50.1% of the company. We expect Ranbaxy will continue to be listed in India and work under the Daiichi Sankyo umbrella with relative autonomy to pursue its generic strategy. Ranbaxy will make a preferential allotment of ~46.2m shares to Daiichi Sankyo. This will bring in ~US$790m, to be used to repay the company's debts.

Scale and speciality focus are the two key determinants of success in the changing generic industry landscape

We believe sustainable growth is possible by effectively managing opportunities and playing to each other's strengths across the full pharmaceutical life-cycle. ***Scale and speciality focus*** are the two key determinants of success in the generic industry and we argue that this deal lays a platform for both. It provides Ranbaxy with:

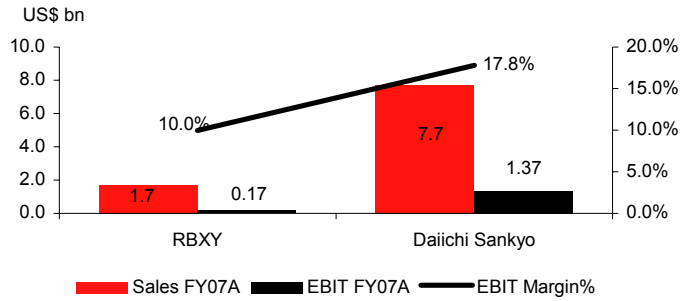
- a much larger product basket to leverage globally;
- strengthened balance sheet to participate in the much needed consolidation;
- Opportunity to capitalise on Daiichi Sankyo's strength in innovation, to help evolve Ranbaxy into a speciality pharmaceutical firm.

Fig 5 Business model – inverted Teva (US$bn)



Source: Macquarie Research, July 2008

Fig 6 FY07A sales, EBIT, and EBIT margin



Source: Macquarie Research, July 2008

At this point we do not include any synergy-driven upside in our revenue model. We make an attempt to highlight possible synergies that Ranbaxy could gain from the deal and, as clarity starts emerging on these issues; it would act as catalysts for the stock.

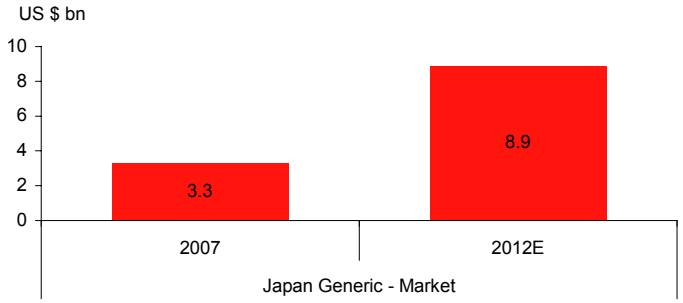
Stated intent to achieve leadership position in Japan: The Japanese government has undertaken several initiatives to promote generics, and is targeting generic industry volume share of ~30% by FY12; from current ~17%.

Ranbaxy could be open to both organic and/or inorganic growth in the Japanese generic market.

We believe Ranbaxy could possibly be open to both organic and/or inorganic growth in the Japanese market. Post the Daiichi Sankyo deal, we believe the balance sheet will look much stronger and with exclusivity cash also coming in, there should be enough appetite to buy growth if the company decides to.

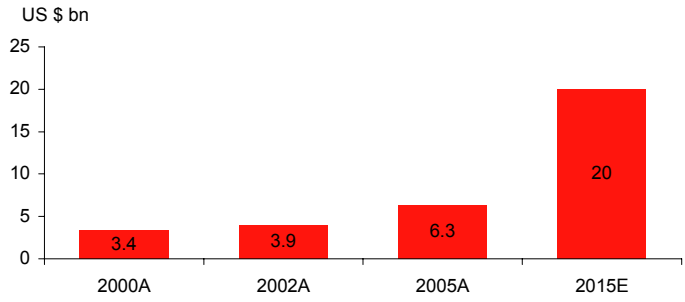
The Daiichi Sankyo brand name will not be used for Ranbaxy's generic business. However, this would not stop the two companies from exploiting the synergies that could emerge. Daiichi Sankyo's existing strong relations with Japanese regulators, doctors, distribution network, as well as local market know-how, should go a long way towards helping Ranbaxy capitalise on the Japanese generic opportunity.

Fig 7 Japan generic market size



Source:Teva & IMS presentation, Macquarie Research, July 2008

Fig 8 Indian pharmaceutical market size



Source:Mc-Kinsey report, Macquarie Research, July 2008

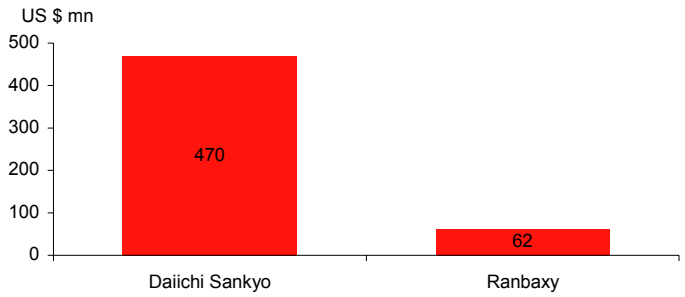
In-licensed products for India: The new patent regime post 2005 recognises product patents in India. Access to Daiichi Sankyo's innovation-based products for distribution in India would be a boost for the large domestic sales force once Ranbaxy's own domestic pipeline starts drying up. Ranbaxy has consistently been a top 3 player in India. IMS-org Data for May-2008 puts them as a market leader with ~ 5.2% market share.

Much criticised geographical diversification, one of the biggest strengths recognised by Daiichi Sankyo as a

Leverage Daiichi Sankyo product portfolio in emerging markets: By effectively utilising Ranbaxy's network, Daiichi Sankyo can more than double its global reach from 21 countries currently to 56. As business growth slows in the mature markets, we believe both companies will be in a strong position to expand their businesses in emerging markets including India, China, Russia and Brazil.

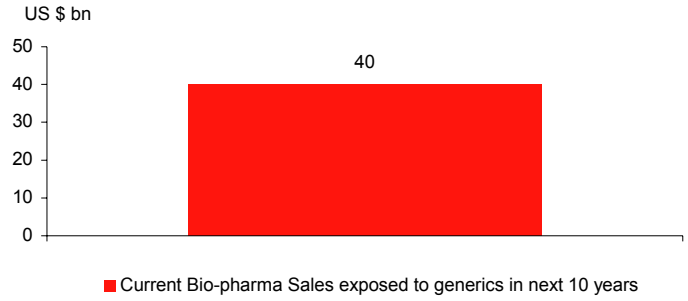
OTC healthcare business – focus area for both: Daiichi Sankyo's OTC portfolio constitutes cold remedy, digestive medicine and dermatological products. Given the focus on OTC by both, opportunities exist to expand product offerings across world markets.

Fig 9 OTC sales of the two companies in FY07



Source: Macquarie Research, July 2008

Fig 10 Generic exposure for biologics in ~10 years



Source: Teva Presentation, February 2008, Macquarie Research, July 2008

Possible co-ordination in: clinical trail design, regulatory relationship, sales force and sharing of costly manufacturing

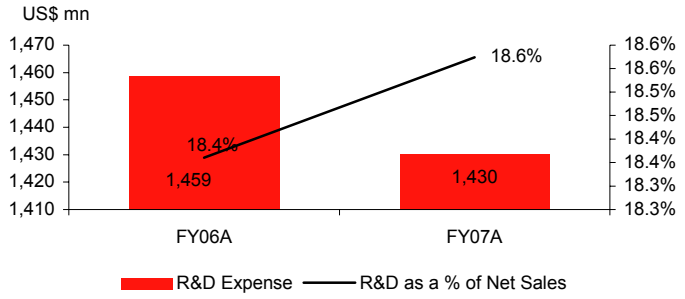
Biogenerics – the next wave of growth for generics: In our view, leadership in the biogeneric space would require: 1) technology platforms; 2) market presence; 3) regulatory expertise; and 4) a rich portfolio basket to make sales force productive.

Daiichi Sankyo has a strong marketing presence in the US and the EU, as well as R&D expertise in biotech (having acquired U3 pharma AG, a European biotech firm for US$235m). As a result, we think RBXY is on a strong footing to play the biotech opportunity given its low cost position and recent acquisition of Zenotech.

We believe Ranbaxy could tap into Daiichi Sankyo's expertise in clinical trial design, its relationship with regulators and its marketing power in the US and the EU. For biogenerics and branded biologics, the companies could share costly and difficult-to-build manufacturing facilities to bring costs down. This could provide further synergies as bio-facilities need to be operational well in advance of product approval. In addition, biosimilars that are not substitutable will require promotion and there is a high possibility of sales force co-ordination to provide marketing and distribution synergies.

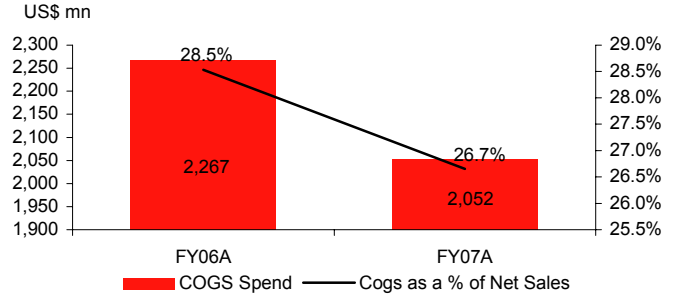
Manufacturing & R&D collaboration: This deal can also provide substantial synergy in the areas of: a) compound synthesis; b) contract research & manufacturing; and c) clinical trials and data management.

Fig 11 Daiichi Sankyo R&D expense



Source: Macquarie Research, July 2008

Fig 12 Daiichi Sankyo COGS expense



Source: Macquarie Research, July 2008

If we assumed Daiichi Sankyo outsourced a conservative 15% of current R&D and COGS expense of ~US$3.5bn to Ranbaxy over the next 5 years, and Ranbaxy does this at half the Daiichi Sankyo cost, this could translate to an opportunity of around ~US$250m in recurring revenue potential for Ranbaxy over the next few years, depending on the speed with which the two companies can put this together.

We have not incorporated any numbers for this scenario in our revenue model as we wait for further clarity from management. Given that contract manufacturing and research assignments come with confidentiality clauses, there may be low visibility on the potential revenue streams and timeline for the same. However, we believe the revenues and earnings for contract manufacturing and research is much more stable.

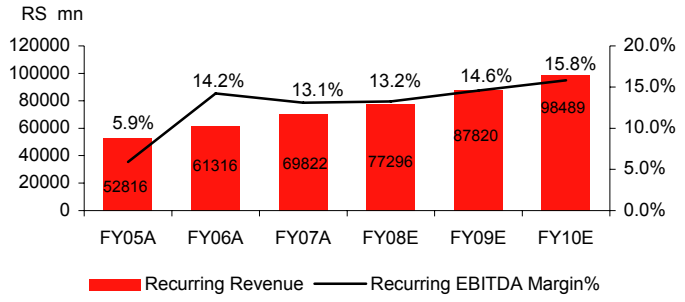
Base business – steady growth

We forecast ~13% growth in the base business, excluding exclusivity-sales, between FY08–10E. We believe this will be led by: a) increasing demand for generics globally; b) a changing market and product mix for RBXY and c) RBXY's strong pipeline and presence across all major markets.

We also model the recurring EBITDA margin to reach ~ 15.8% by FY10E as we believe Ranbaxy will benefit from operating leverage, higher emerging market sales and the launch of difficult-to-manufacture products that would see limited competition and higher margins.

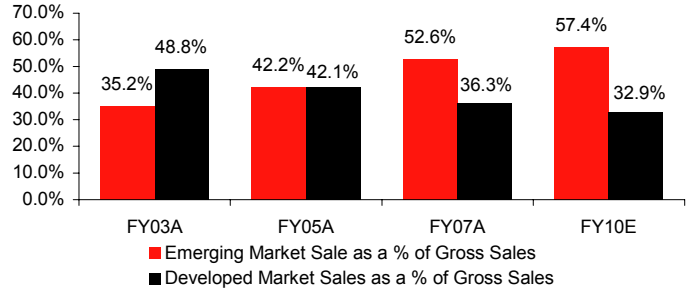
We believe Ranbaxy's strategy of acquiring stakes in domestic Indian companies with a presence in oncology, biogenerics, peptides and injectables will strengthen its portfolio mix. These niche therapeutic areas offer high growth potential, sustainable earnings and healthy margins.

Fig 13 Steady revenue growth – margins to expand



Source: Macquarie Research, July 2008

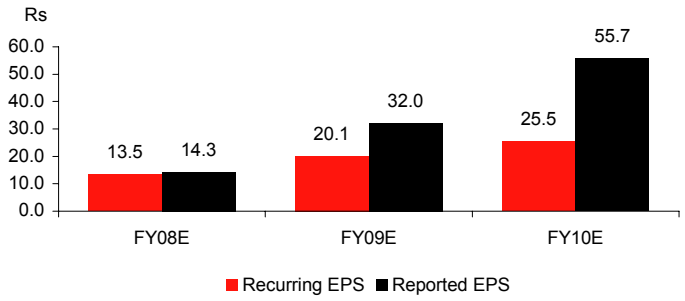
Fig 14 Changing market – mix



Developed markets include : NA, France, UK, Germany Sales
Emerging Markets: India, ME, Asia Pac, LATAM, Africa, CIS & Romania
Source: Macquarie Research, July 2008

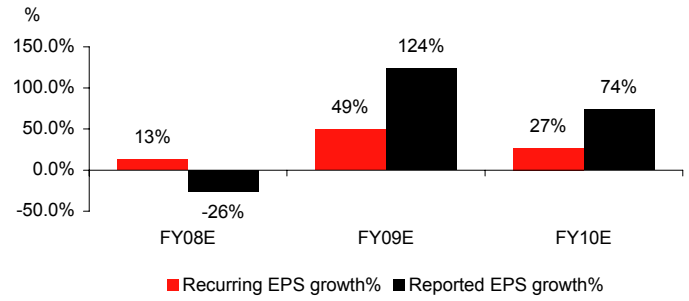
Reported earnings driven by exclusivity revenues are expected to increase by 124% and 74% in FY09E and FY10E, respectively. We have not assumed any translation loss in FY08E as we treat this as an exceptional item throughout. This would bring the reported numbers down for FY08E.

Fig 15 Forecast EPS



Source: Macquarie Research, July 2008

Fig 16 EPS growth estimates



Source: Macquarie Research, July 2008

FDA and DoJ probe – risk?

An investigation into the Ponta Sahib manufacturing facility has been under way for ~3 years. The FDA inspected the facility in February 2006, and a warning letter was sent to Ranbaxy by FDA in June 2006.

This warning letter identified relevant violations of good manufacturing practices (GMP), including the inability to include complete drug testing data, insufficient documentation to demonstrate that stability tests were valid and lack of sufficient laboratory personnel and instrumentation in the quality control unit to conduct drug stability testing.

In February 2007, federal agents conducted a search of Ranbaxy's New Jersey offices. On 3 July 2008, a motion was filed in a US court by the DoJ, seeking certain documents.

No legal proceedings in the sense of a prosecution have been initiated. Ranbaxy has agreed to produce the specific documents sought by the motion.

We think this motion points towards an investigation of whether Ranbaxy fabricated test data or attempted to conceal the same from FDA inspectors. Ranbaxy has denied this.

Though discomforting, we believe there are few key points to note regarding the motion:

1) Existing products continue to be sold from the facility, with only new products not approved during the last ~3 years. If discrepancies were evident, we believe it is unlikely that the FDA would have allowed continuous distribution of products during the investigation.

2) Over the course of the investigation, the FDA gathered over 200 random samples of various products marketed by the company in the US. These products have been independently tested by the FDA and were found to comply with all specifications. This should strengthen Ranbaxy's argument that public health was not endangered by distribution of products from Ponta.

3) The company has not been implicated with any wrong-doing, and through this motion the DoJ is requesting documents regarding the audit that Parexel consulting made on Ranbaxy's initiative to further strengthen its quality controls.

4) Ranbaxy has agreed to provide the whole audit and believes the contents should allay the DOJ's apprehension. We believe Daiichi Sankyo, which the company says was privy to all communications with the FDA before signing the deal, would be unlikely to go ahead with the deal if these documents proved serious malpractice.

5) The majority of the current US filings are currently done from other manufacturing sites. In fact, the Ohm manufacturing site in the US now contributes a substantial portion of Ranbaxy's US sales. As a risk mitigation strategy, Ranbaxy has been filing FTF products from dual sites.

We also looked at previous cases to establish the possible outcomes.

- Schering-Plough paid the highest ever penalty of US$500m for violation of good manufacturing practices (GMP) in 2002.
- Albe laboratories was asked to refile all its ANDA's originating from the manufacturing facility which would have taken ~18 months, with no sales during that time.
- A US$100m penalty was levied against Abbott in 1999 for GMP violations.

In our view, disgorgement is not meant to remove all profits generated by products in violation of the Food, Drug and Cosmetic (FD&C) Act – which, in the case of Schering-Plough (US$500m penalty) could have amounted to billions of dollars – but should be sufficiently severe to dissuade repeat behaviour.

The sums obtained in these decrees are not meant to be a complete disgorgement of all profits, only for those products in violation.

We note here that each case unique and among other things the FDA also looks at the seriousness of the issue, intention and the firm's ability to remain in business (ie: pay salaries and rent, purchase raw materials and equipment, etc.) after payment of the penalty.

In our base case scenario, we have tried to look at the impact of a Schering-like situation for Ranbaxy, arriving at a penalty payment risk provision of Rs45 per share in our target price calculation. Under a worst case scenario, we include both penalty payment and refiling of ANDA's from the Ponta Sahib facility.

We believe this is an aggressive view, as Schering, which was a branded player, generated billions of dollars in profit, while for Ranbaxy, which manufactures generics, the level of profit is much lower.

Key risks to our thesis

- The outcome of the DoJ probe is much worse than we currently envisage.
- The Federal Trade Commission (FTC) frowns at the FTF settlements between Ranbaxy and innovator companies. This might create uncertainty around the launch timing for these products and might lead to further litigation risks.
- Intensifying pricing pressure in the developed markets is higher than we expect. We have factored in ~10% price erosion for the base generic business in the US. Higher price erosions would impact sales and margins.
- There is potential currency risk as Ranbaxy operates in several countries. Appreciation of the rupee against major international currencies for locations where Ranbaxy operates might adversely impact sales. We have assumed a Rs/US$ exchange forecast for FY09E ~ Rs42 and FY10E ~ Rs41.38 in line with Macquarie currency forecasts.
- If Ranbaxy makes a value destroying acquisition.

Valuation – compelling

Our target price implies upside potential of ~30% after adjusting for the open offer

After adjusting for the open offer (Rs 96/share) and value of FTF exclusivity (Rs123/share), we estimate Ranbaxy is trading at 9.6x FY10E earnings, almost a 37% discount to the sector average PER.

We think this discount is unwarranted given Ranbaxy's scale, geographical diversification; strengthened balance sheet and superior earnings growth profile of ~29% vs. the 22% peer average.

Fig 17 Decoding Ranbaxy's underlying PER multiple

Ranbaxy P/E Ratio	FY08F	FY09F	FY10F
P/E	34.4 x	23.1 x	18.2 x
P/E (Price adj for exclusivity value)	25.3 x	17.0 x	13.4 x
P/E (Price adj for exclusivity & open offer)	18.2 x	12.2 x	9.6 x
Indian Front Line Generic Average	19.3 x	17.2 x	15.3 x

Source: Macquarie Research, July 2008

Fig 18 Frontline Indian generic valuation

Company	Year End		Current Price	Market Cap US$mn	EPS CAGR FY07-10	PER Mar-09F	PER Mar-10F	PER Mar-11F	EV/EBITDA Mar-09F	EV/EBITDA Mar-10F	EV/EBITDA Mar-11F	EV/Sales Mar-09F	EV/Sales Mar-10F	EV/Sales Mar-11F
DRL	Mar	Rs	627	2,472	18%	18 x	16 x	15 x	11 x	10 x	8 x	1.9 x	1.7 x	1.5 x
Cipla	Mar	Rs	238	4,334	16%	22 x	18 x	17 x	18 x	14 x	12 x	3.7 x	3.2 x	2.7 x
Sun	Mar	Rs	1396	6,742	5%	17 x	18 x	16 x	16 x	17 x	NA	7.2 x	6.8 x	NA
Glenmark	Mar	Rs	658	3,858	59%	21 x	17 x	13 x	17 x	14 x	9 x	7.2 x	5.5 x	3.6 x
India Average Front Line Generics					21.7%	19.3 x	17.2 x	15.3 x	16 x	15 x	10.1 x	5.6 x	4.9 x	2.8 x
Bloomberg Consensus Estimate														
Company	**Year End**		**Current Price**	**Market Cap US$mn**	**EPS CAGR FY07-10**	**PER Dec-08F**	**PER Dec-09F**	**PER Dec-10F**	**EV/EBITDA Dec-08F**	**EV/EBITDA Dec-09F**	**EV/EBITDA Dec-10F**	**EV/Sales Dec-08F**	**EV/Sales Dec-09F**	**EV/Sales Dec-10F**
Ranbaxy recurring	Dec	Rs	463	5095	28.7%	34.4 x	23.1 x	18.2 x	22.5 x	15.9 x	12.4 x	3.0 x	2.3 x	2.0 x
Ranbaxy Reported	Dec	Rs	463	5095	42.3%	32.3 x	14.4 x	8.3 x	21.4 x	10.3 x	5.9 x	2.9 x	2.1 x	1.6 x

Source: Macquarie Research, July 2008

Based on a sum of the parts valuation, we derive a value of **Rs470** per share for Ranbaxy in our base case scenario.

- We value the 180-day FTF-exclusivity upside at Rs123 per share based on a probability weighted DCF for the known one-time profits.
- We value the base business at **Rs392**/share at 15.4x FY10E earnings, in line with the large-cap sector peer average.
- In our base case scenario, we try to look at the impact of a Schering-like situation for Ranbaxy, to arrive at Rs45 /share penalty payment risk provision in our target price calculation. Note that Schering-Plough paid the FDA the highest ever penalty of US$500m for a violation of good manufacturing practices in 2002.

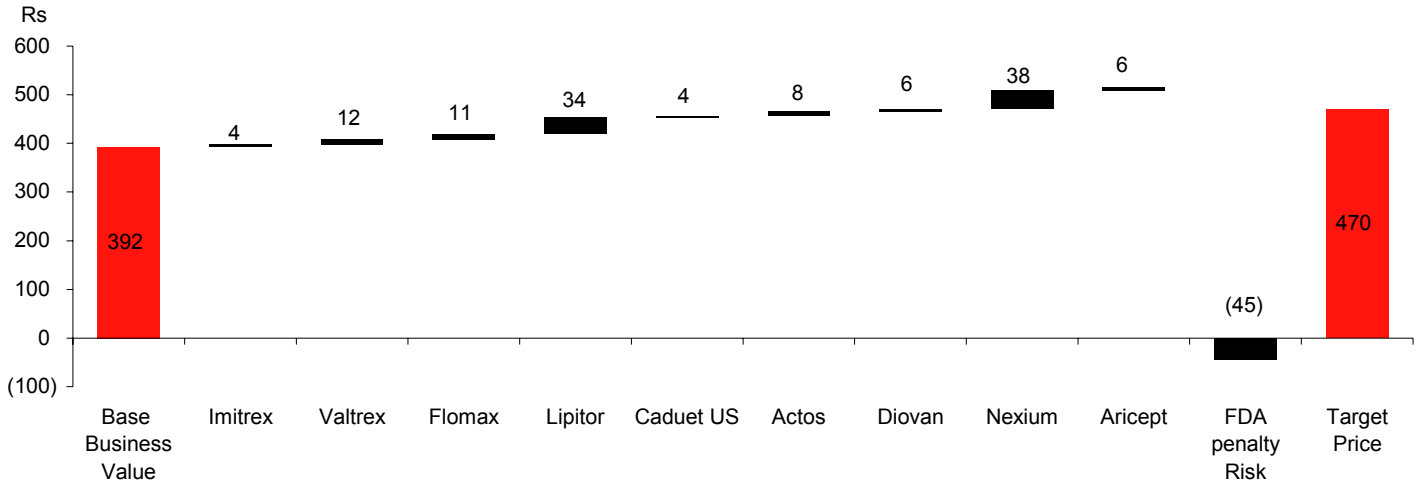
If we adjust the current market price for an open offer price of Rs737 per share, assume all tender shares, an acceptance ratio of 33% and a short-term capital gains tax of 30%, it implies a post open-offer market price of **Rs363** and upside potential of **~30%** from current levels.

As Ranbaxy's cost structures are currently much higher than peers due to a higher SG&A expense, we also look at the EV/sales multiples to stress-test our target price. As evidenced in figure 21, Ranbaxy historically has traded in the range of 2–4x 1-year forward sales. Using the **Rs470** target price implies an EV/sales ratio of 2.35x the 1-year forward EV/sales multiple, which is well below the historical mean.

Our DCF-based fair value is Rs459 per share. We use an interim growth rate of 12% between FY14–21 and a 4% terminal growth rate (to perpetuity). We have used a discount rate (WACC) of 12.5% for our analysis. (Refer to Figure 20). We use an equity risk premium of 6 %, risk free rate of 9.5% and a beta of .5 to arrive at a WACC of 12.5%. RBXY post deal is debt free.

Given the opportunity to leverage Daiichi Sankyo's portfolio, Ranbaxy's improving product and market mix, strengthened balance sheet and unmatched FTF exclusivity pipeline, we believe RBXY is better placed than its peers to capitalise on growth opportunities over the next decade.

Fig 19 Target price



Source: Macquarie Research, July 2008

Fig 20 DCF valuation

Ranbaxy DCF Model, December year-ends, 2008–2013E

Year-end Dec (Rs m)	**2008E**	**2009E**	**2010E**	**2011E**	**2012E**	**2013E**	**2014E**	**2015E**	**2016E**
EBITDA	10,223	12,790	15,552	19,503	22,141	26,569			
Tax expense	(1,584)	(2,348)	(2,884)	(3,369)	(3,985)	(5,181)			
Change in working capital	(1,038)	(1,611)	(3,201)	(3,289)	(2,669)	(2,669)			
Cash flow from operations	7,601	8,831	9,467	12,846	15,486	18,719			
Capital expenditure	(4,638)	(5,708)	(6,402)	(6,020)	(6,122)	(6,122)			
Free cashflow	2,963	3,122	3,065	6,826	9,365	12,598	14,109	15,802	17,699
Free cashflow for valuation purposes	1,331	3,122	3,065	6,826	9,365	12,598	14,109	15,802	17,699
Present value of cashflows	1,297	2,793	2,437	4,823	5,881	7,031	7,000	6,969	6,936

Discount rate (%)	**12.5%**
1. Present value of cashflow till 2013	
Total PV of free cashflow till 2013 {a}	24,262
2. Present value of cashflow from 2014 to 2021	
Growth from 2014 to 2021	**12.0%**
PV of free cashflow from 2014-2021 {b}	55,121
3. Terminal value calculation	
Growth from 2021 to perpetuity (%)	4.0%
FCF in FY21	31,191
Exit PER multiple (X)	12.2
Terminal value	381,632
PV of terminal value {c}	82,967
Total company value {a} + {b} + {c}	162,349
Net debt/cash	11,488
Minority Interest	695
Associates / investments	3,679
FDA penalty Risk assumption	21,500
+ FTF exclusivity PV	56,702
Value to equity holders	212,024
Value to equity holders (Rs/share)	**459**

Sensitivity of 12-month DCF to WACC and Terminal Growth

Assuming terminal growth rate of 4%, if WACC and 2014-2021 growth rate changes

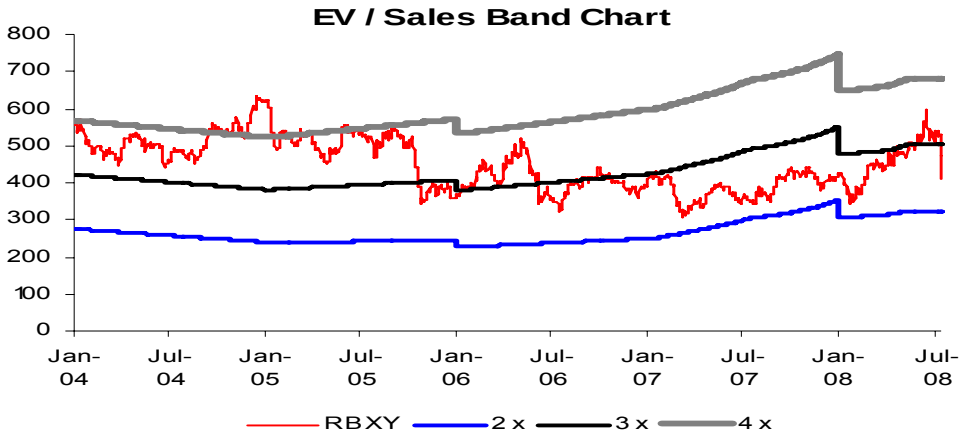
Interim Growth \ **WACC**	459	10.5%	11.5%	12.5%	13.5%	14.5%
8.0%	505	443	396	359	330	
10.0%	550	479	425	384	351	
12.0%	601	520	459	411	374	
14.0%	658	565	496	442	400	
16.0%	722	617	538	477	428	

Assuming growth rate from 2014–21 remains 12%, if terminal growth rate changes

Terminal Growth \ **WACC**	459	10.5%	11.5%	12.5%	13.5%	14.5%
2.0%	527	468	422	384	353	
3.0%	559	491	438	397	363	
4.0%	601	520	459	411	374	
5.0%	658	557	485	430	387	
6.0%	741	609	518	453	404	

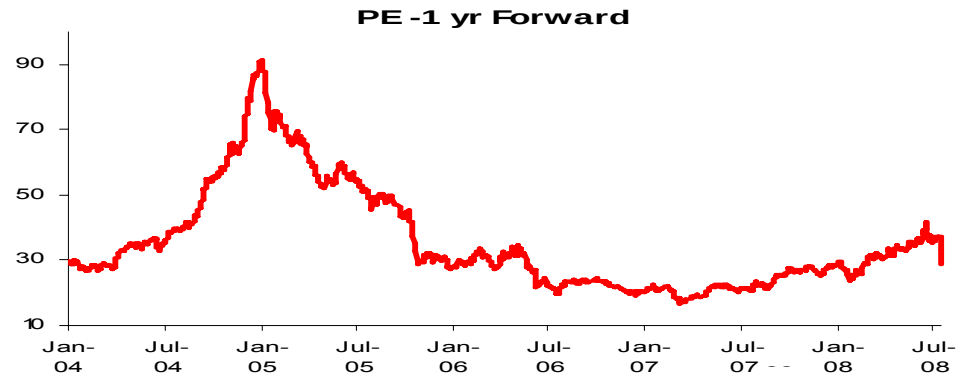
Source: Macquarie Research, July 2008

Fig 21 Ranbaxy EV/ sales band chart



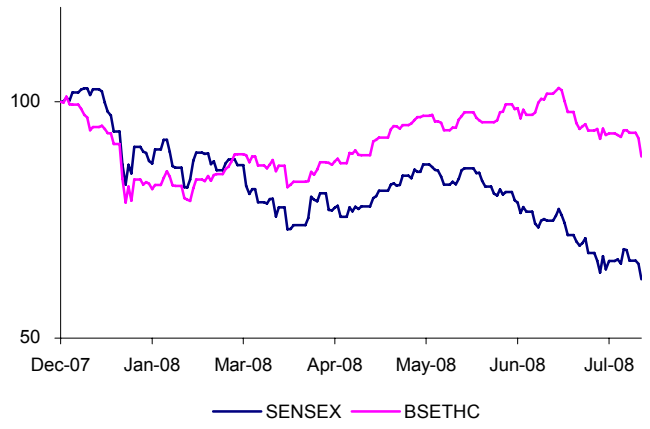
Source: Bloomberg, Macquarie Research, July 2008

Fig 22 PER – 1-yr forward



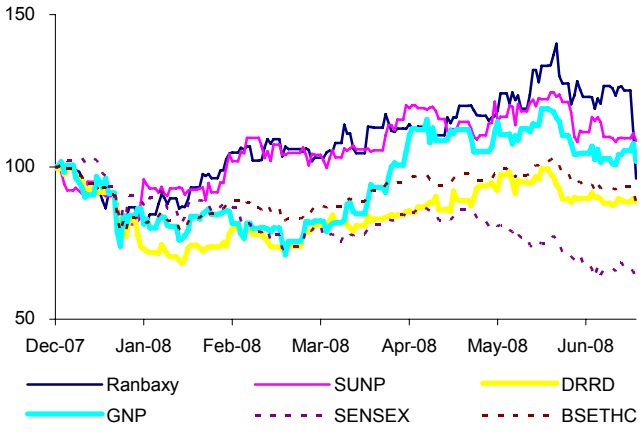
Source: Bloomberg, Macquarie Research, July 2008

Fig 23 Sensex vs Healthcare Index



Source: Macquarie Research, July 2008

Fig 24 Stock selection is important



Source: Macquarie Research, July 2008

If you can't beat them, join them

Preparing for the future – industry-shaping role again

Daiichi Sankyo (J4568), one of the largest pharmaceutical companies in Japan, has announced its intention to acquire a majority stake in Ranbaxy. Jointly, this will catapult the two companies into the league of top 20 pharmaceutical companies in the world in terms of sales, whereas independently Ranbaxy stood at 50th and Daiichi Sankyo at 27th.

The deal supports the notion that innovator and generic companies could work together, and be better prepared to face challenges to their existing business models going forward.

According to IMS data services, in the next 4 years US$109bn worth of branded drugs face the threat of generic competition. While this provides a strong market opportunity for generic players to capitalise on in the medium term, the number of new molecules launched by the innovator companies is on the decline which could put pressure on long-term growth potential.

The average number of NCE [New Chemical Entity] launches between 2001–07 was 32pa, versus 44pa between 1994–00. IMS forecasts of NCE launches in 2008 are much lower, between 24–29. Increasingly the filings are for biologics, and the blockbuster launches are also on the decline.

We believe the deal with Daiichi Sankyo is a unique business model for sustainable growth by effectively managing opportunities and playing to each other's strength across the full pharmaceutical life-cycle. We believe scale and speciality focus will be the two key determinants of success in the changing generic landscape going forward, and we believe this deal helps to build both measures.

It provides Ranbaxy with a much larger pipeline to leverage globally and a strengthened balance sheet to participate in the much-needed consolidation. It also opens up an opportunity to capitalise on Daiichi Sankyo's strength in innovation to transform Ranbaxy into a speciality pharmaceutical firm with a niche portfolio of value-added generics and NCE.

Ranbaxy continues its legacy of playing an industry-shaping role in the Indian pharma space, as it did in the mid 90s, when it was the first to change the then existing predominantly domestic business model by expanding into the US market. The rest followed and the resulting growth of the Indian pharma sector is well-documented history.

Not uncharted territory – Novartis a successful example

Novartis (NOVN VX, Not Rated) has an existing generic business through Sandoz (Not Listed), which is the second largest generic company in the world. Even under an innovator umbrella, Sandoz has continued to grow through acquisition in the generic space (eg Hexal in Germany, Eon Labs in US).

In our view, the fact that Sandoz has been first to launch biogenerics in Europe proves the synergies and headway that can be exploited by the generic and innovator company working together.

Ranbaxy and Daiichi Sankyo put together create an Inverted Teva Model

Teva (TEVA IT, Not Rated) has a strong innovation portfolio, along with its core generic focus. This helps Teva build its brand, create a balanced business model and generate a regular stream of highly profitable cashflow to supplement its generic growth strategy. In 2007, its Copaxone, Azilect and Respiratory (HFA) franchises contributed US$1.8bn of the company's total US$9.4bn sales.

As is evident, none of the top generic players in the world are pure generic players. Moving up the value chain and building a speciality pharma model is important for sustainable growth in the long run. Indian generic companies have been trying to do that, but with limited resources it is proving to be a risky and difficult process to implement.

By joining hands with Daiichi Sankyo, we believe Ranbaxy has smoothed its transition process towards being a speciality pharma company. While we believe the exclusivity bonanza coupled with a steady base business will drive the earnings momentum over the medium term, it will have a much stronger player in Daiichi Sankyo by its side to prepare for the future, where we believe scale and specialty focus will separate the winners from the also-ran.

Structure of the deal

Daiichi Sankyo is expected to acquire the majority equity stake in Ranbaxy by a combination of (i) purchase of shares held by the promoters; (ii) preferential allotment of equity shares (9.5% of fully diluted share count); (iii) an open offer to the public shareholders for 20% of Ranbaxy's shares, as per Indian regulations, and (iv) Daiichi Sankyo's exercise of a portion or all of the share warrants to be issued on a preferential basis. All the shares/warrants will be acquired / issued at a price of Rs737 per share.

Fig 25 Estimated timeline

Activity	Timeline
EGM to approve pref issue and the deal	**15 July – done**
Open-offer	7 Aug 2008
Close of open-offer	27 Aug 2008
Change of management control	4Q FY07
FCCB conversion happens after change of control	4Q FY07
Closing of the deal	Tentative by Mar-09

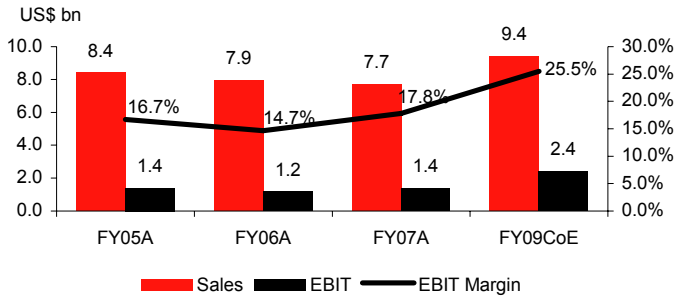
Source: Macquarie Research, July 2008

Fig 26 Structure of the deal

	Shares (m)	Stake %	Comments
Post dilution share count (w/o warrants)	**462**		**Without warrant conversion**
Promoter shares acquired by Daiichi Sankyo	129.9	28%	At Rs737/share.
Options outstanding	7.6		Assumed would be exercised
Preference allotment	46.2	10.0%	US$791m cash comes in at Rs737/share. RBXY does a preferential allotment of 46.2m shares equivalent to 9.5% of fully diluted share count of 486m shares if warrants exercised, and 10% on 462m, assuming warrants not exercised.
Open offer - (Max shares acquired)	85.4	18.5%	Open offer: opens 8 Aug & closes 27 Aug 2008 subject to regulatory approval: 20% of (373+46+7.6)
If all tender shares during open offer, Daiichi Sankyo does not exercise the warrants and FCCBs are converted, Daiichi Sankyo's stake would go up to 56.6% with 462m shares outstanding post conversion of FCCB.			
Warrants	23.8		Up to maximum US$408m additional cash can come in based on exercise of warrants at Rs737 / share. (Time frame 6–18 months).
If all tender shares during open offer, warrants by Daiichi Sankyo are exercised and FCCBs are converted, then the stake would go up to 58.7% with fully diluted share count at 486m, US$408m additional cash would come in.			
FCCB	35.3	7.6%	Management assumes FCCB to convert into equity shares at Rs540.
Pre deal / dilution share count	373		
Post deal / dilution share count (with warrants)	**486**		If warrants are exercised

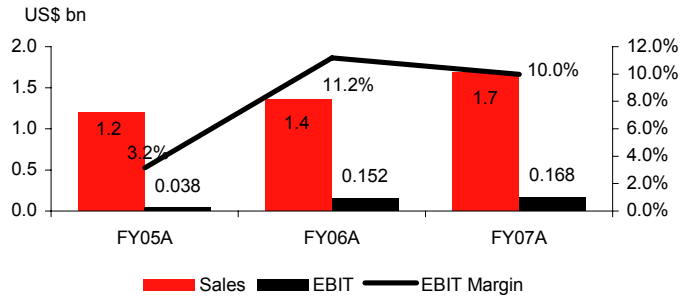
Source: Macquarie Research, July 2008

Fig 27 Daiichi Sankyo sales and EBIT



Source: Macquarie Research, June 2008

Fig 28 Ranbaxy sales and EBIT



Source: Macquarie Research, June 2008

Rationale of the Daiichi Sankyo – Ranbaxy deal

Though at this point we do not include any upside in the revenue model, we try to highlight possible synergies Ranbaxy could gain from the deal. We believe as clarity starts to emerge on these issues, there will be positive catalysts for the stock and upside potential for our numbers.

Stated intent to achieve leadership role in the Japanese generic market

Several initiatives in Japan to increase generic prescribing

Japan is the second largest drug market after the US, with generic penetration in the range of 15–17% by volume and by value in the range of 5–7% (US$3.5–4bn). FY05 cumulative sales of the ~37 JGPMA listed companies which had >80% share of the Japanese generic market was ~¥338bn, with operating profit at ~¥36bn.

A rapidly ageing population and increasing healthcare costs have pushed the Japanese government to take steps to promote the use of generic drugs. The government has set a target of 30% generic penetration by volume in 2012. Other initiatives include:

- Changes to prescription forms that allow default substitution unless explicitly prohibited;
- Introduction of a dispensing fee for pharmacists favouring generics;
- Increase of the number of diagnosis procedure combination (DPC – fixed payment per in-patient stay) hospitals;
- Generics to be listed for reimbursement twice yearly (from once).

The current generic market in Japan seems to be divided in two distinct parts:

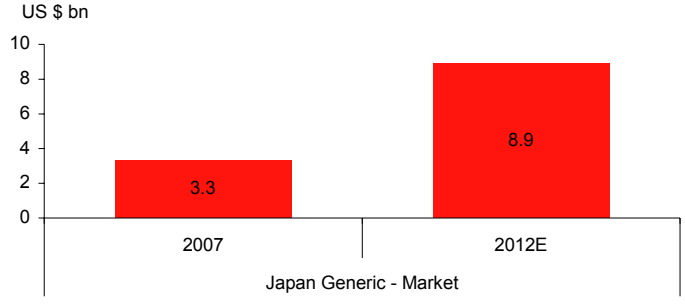
- First, segment includes GPs, clinics, small hospitals of <20 beds and the pharmacies associated with them. This market, which holds more bargaining power, will typically be slow to accept generics. Companies positioned strongly in this segment are Sawai and Towa (strong in hospitals which have less than 20 beds). These companies have strong sales forces and established relationship with doctors.
- The second segment consists of big hospitals including all the DPC affiliates (fixed payment per in-patient stay). An increase in the number of DPC hospitals will drive growth in the second market due to a thrust towards controlling cost.

  Stable supply, availability of formulations at different strengths and a strong distribution channel with wholesalers are key growth drivers for this segment. Thus far, this market has been addressed by large pharma generic divisions or small pure generics firms with limited sales capabilities. We expect generic sales will increase with the switch to the generic-is-default Rx box and emphasis on cost-cutting.

  Companies focused on the DPC affiliate/pre-affiliate market are Nippon-Chemiphar, Eisai and Kyorin's generic pharma divisions and several other smaller companies.

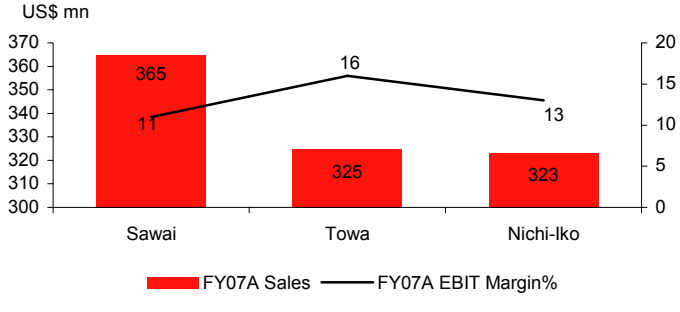
Regardless of the actual volume share achieved by 2012, Japan remains an aggressive growth market for generic manufacturers as the government's intent to increase generic utilisation is visible. Teva estimates the Japanese market to reach US$8.9bn by 2012 from the current US$3.3bn.

Fig 29 Japan generic market size



Source:Teva Presentation, Macquarie Research, July 2008

Fig 30 Major listed Japanese generic companies



Source: Macquarie Research, July 2008

Sawai [4555 JP, Not Rated] (FY07 sales ~ US$365m, EBIT margin ~ 11%), Towa [4553 JP, Not Rated] (FY07 sales ~ US$325m, EBIT margin ~ 16%) and Nichi-Iko [4541JP, Not Rated] (FY07 sales ~ US$323m, EBIT margin ~ 13%) are among the listed leaders in the Japanese generic space.

Based on Teva's estimate of current market size, this translates to around 9–10% market share for each in value terms. We believe a target of holding a leadership position in a much larger +US$8bn market going forward is a tall aim to achieve in a short span of time following only an organic growth route.

Though Ranbaxy's strategy to achieve a leadership position in the Japan generic market is not yet elucidated, we believe Ranbaxy could possibly be open to both organic and/or inorganic growth in the market. Post the deal, the balance sheet would look much stronger with zero debt and the exclusivity cash that will come in over the next 4–5 years should provide it with enough appetite to buy growth if it decided to.

Inputs from the Daiichi Sankyo conference call suggest that the Daiichi Sankyo brand name will not be used for Ranbaxy's generic business. In our opinion it is better to have different branding for innovator and generic businesses. Note that Novartis uses 'Sandoz' as the name for its generic business.

However, this does not stop the two companies from exploiting the synergies that could emerge in the Japanese generic market. We believe that Daiichi Sankyo's (Japanese domestic FY07 sales of US$5.6bn) existing strong relations with Japanese regulators, doctors, distribution network and the local market know-how would go long way in helping Ranbaxy capitalise on the fast-growing Japanese generic opportunity, which is forecast to double in the next 4–5 years.

Recently many domestic branded players like Tanabe Mitsubishi and Kyorin have entered the fast-growing generic segment to capture a piece of this fast growing generic segment. International generic powerhouses like Teva and Mylan are also in the fray to capture a piece of the lucrative generic space.

Amlodipine (market size US$2bn), filed by Ranbaxy, has the unique distinction of being the first product developed by any foreign generic pharmaceutical company outside Japan and subsequently being granted approval by the Ministry of Health, Labour and Welfare (MHLW). Three Teva products were rejected in 2007.

Ranbaxy currently has a 50:50 JV in Japan called Nihon Pharmaceuticals (with Nippon Chemiphar) with FY07 sales of US$25m. Given Nippon Chemiphar's historical reputation as a branded drug company, nationwide wholesalers such as Mediceo, Paltac and Alfresa are handling products of Nippon Chemiphar as priority generics. Since 2004 Ranbaxy has filed seven products in Japan and so far has a 100% success rate in getting approvals. Currently, Ranbaxy has four products being marketed in the Japanese generics market and has a strong portfolio in the pipeline which will be introduced during 2008 and 2009.

Fig 31 Key players

Domestic players	
Listed generics	**Branded players entering generic**
• Sawai Pharmaceuticals	• Tanabe – generic subsidiary
• Towa Pharmaceuticals	• Nihon Chouzai – Nihon generics
• Nichi-iko	• Teikoku Seiyaku – Teikoku Medix
• Nippon Chemiphar	• Kyorin – acquired Toyo Pharmar (2005)
	• Nipro – acquired Takeshima (03), Hishiyama (04), Zensei (' 06)
International Players	
Global	**Indian**
• Teva	• Ranbaxy – JV with Nippon Chemiphar (2002)
• Sandoz – via NipponHexal	• Zydus Cadila group – acquired Nippon Universal -2007
• Mylan –via Merck Seiyaku	• Lupin acquired Kyowa (2007)

Source: Macquarie Research, July 2008

In-licensed products for India

In the new patent regime post 2005, product patents are now recognised in India. Daiichi Sankyo has a strong track record in innovation. A possible tie-up might provide access to some of these patented products for Ranbaxy's domestic sales force to market in India, once their own domestic pipeline starts drying up due to the changed patent regime.

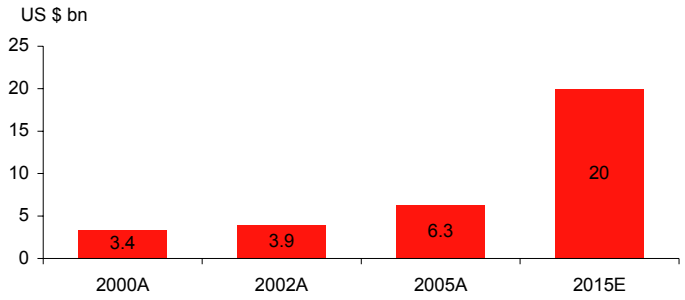
Ranbaxy's own NCE pipeline is at a fairly nascent stage. From Daiichi Sankyo's perspective also it makes sense to utilise Ranbaxy's strong field-force and market leadership to gain access to one of the promising pharmaceutical markets of the future.

In May 2008, Daiichi Sankyo had signed a deal with GSK to co-promote Benicar and AZOR (Daiichi Sankyo's flagship products which had FY07 global sales of US$1.7bn) in the Indian market, highlighting clearly its intention to find a market for its patented products in India. Ranbaxy is the second largest player in the Indian market with ~ 5% market share and 2007 sales of US$338m.

The Indian market is expected to grow at a much faster rate of 12–13% (compared to world pharma growth of 5–8%) on the back of income growth, medical infrastructure improvement, insurance penetration and an increase in the prevalence of diseases. A 2007 report by McKinsey puts the Indian pharmaceutical market at US$20bn by 2015 from around US$6bn in 2005.

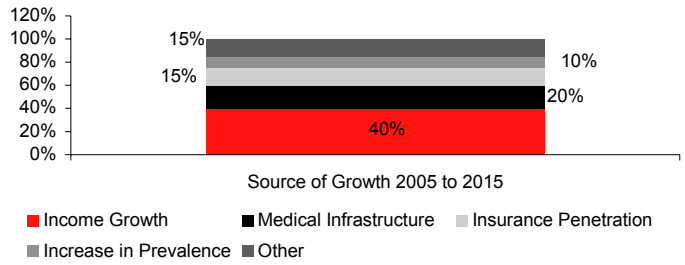
As an example of an existing co-promotion deal and the potential of such arrangements, Daiichi Sakyo's Benicar was being co-promoted by Forest in the US and the co-promotion contract revenue booked by Forest was in the range of ~25% of US$650m Benicar's US sales in the year ending Mar-07 .

Fig 32 Indian pharmaceutical market size



Source:Mc-Kinsey report 2007, Macquarie Research, July 2008

Fig 33 Source of US$14bn growth



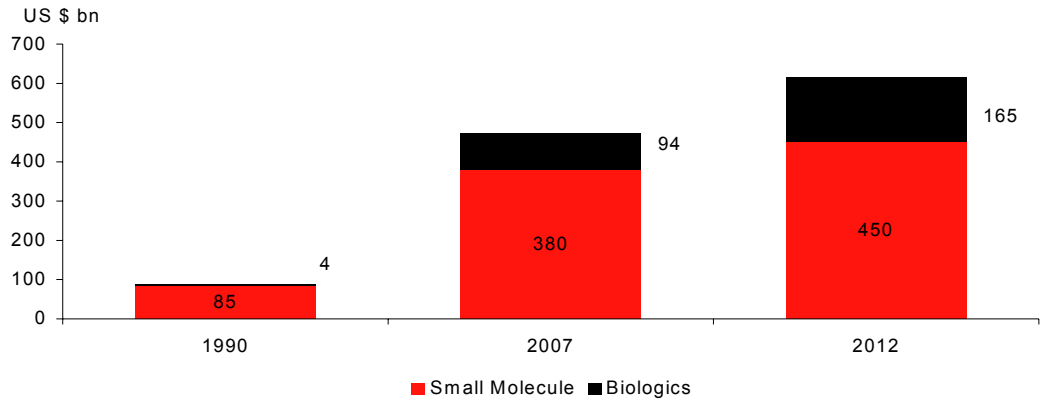
Source: Mc-Kinsey Report 2007,Macquarie Research, July 2008

Biogenerics – next wave of growth for generics:

The biogenerics market is a significant opportunity for generic players over US$40bn in current biopharmaceutical sales would be exposed to generic competition over the next 10 years. This is a segment which has higher barriers to entry and attractive returns.

According to Evaluate Pharma data services, biopharmaceuticals are expected to grow at a much faster rate of 12% CAGR between FY07–12, versus the small molecule market of 3%. The NDA approval status in the last couple of years also points towards this changing trend globally, with an increasing number of approvals in the biologics space.

Fig 34 Developed world pharmaceutical market



Source: Evaluate Pharma, Macquarie Research, July 2008

The European Commission adopted a new directive that paved the way for legal approval of biosimilars in the European Union. Five biosimilars have garnered approval in the EU.

Of the five, two are generic versions of recombinant growth hormone (rHGH)–Omnitrope (Sandoz) and Valtropin (Biopartners). The remaining three are “knock-off” versions of erythropoietin alpha–Binocrit (Sandoz), Epoetin alpha Hexal (Hexal) and Abseamed (Medice Arneimittel Putter). A variety of biosimilars, developed by generic manufacturers, is already being sold in less-regulated Asian markets.

In our view, rising drug costs and increasing expenditures on biologics (both by Medicare and private insurers) have left US lawmakers with no choice but to draft legislation for approval of follow-on biologics sooner than later.

Biosimilars are essentially generic drugs which will require clinical trials, are difficult to manufacture and in most cases not substitutable, so would require different distribution set-up in the developed world to promote. In our view, leadership in the biogeneric space would require: 1) technology platforms; 2) market presence; 3) regulatory expertise and 4) a rich portfolio basket to make a sales force productive.

We believe Daiichi Sankyo’s strong presence in Europe and the US and its R&D capabilities in biotech (given its recent acquisition of U3 pharma AG, a biotechnology firm in Europe for US$235m) provides Ranbaxy with a strong footing to play this opportunity, given its low cost position and recent acquisition of Zenotech.

Ranbaxy can tap into Daiichi Sankyo’s expertise in clinical trial design and its relationship with regulators. Bioequivalent and branded biologics can share costly and difficult-to-build manufacturing facilities to bring the costs down. This could provide further synergies as biofacilities need to be operational well before approval of the products. In addition, biosimilars that are not substitutable will require promotion and there is a high possibility of a sales force co-ordination to provide marketing and distribution synergies.

Expertise in oncology and biogenerics with the acquisition of Zenotech helps Ranbaxy fill a gap in its generic portfolio. We believe the acquisition of Zenotech makes strategic sense, as oncology is one of the fastest-growing therapeutic segments globally, with significant growth potential for generics as this area would see limited competition. Until regulations and approvals are in place in developed markets, we see biogenerics as a lucrative emerging market opportunity over the short term.

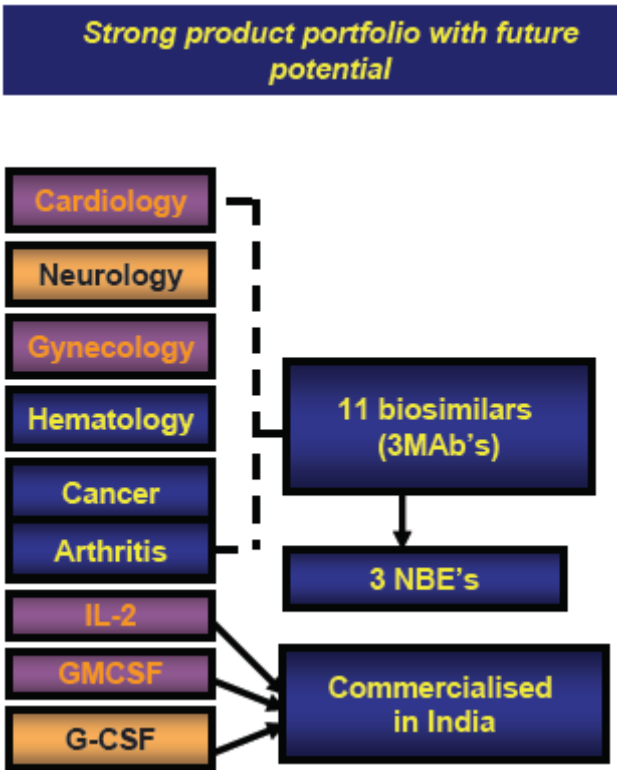
Zenotech currently markets three biologics in India – GCSF, GMCSF, and IL 2 and has a pipeline of seven more biologics under development. RBXY is exclusively developing with Zenotech to sell G-CSF in the EU markets. For markets outside EU, RBXY has semi exclusive agreement. Zenotech has two R&D facilities and manufacturing facilities with total employee strength of 220 including 50 scientists in R&D.

Fig 35 Where does competition stand – status of biogeneric development?

Company	Launched biosimilars	In the pipeline
Barr	EPO scheduled for launch in Eastern Europe	G-CSF (Filgastrim), Insulin, and HGH
Biocon	Insugen (Insulin in India and China), Erypro (EPO) G-CSF, Nimotruzmab, BIOMAb EGFR (cancer)	Insulin, glargine and HGH
Biopartners	Valtropin (rHGH)	Alpheon (INF-α) and EPO
Cipla	None	Autoimmune, cancer and cardiovascular
Dr. Reddy's Labs	G-CSF (Filgastrim)	Nine (9) development programs
Glenmark	None	GBR 500 (mAb for MS), GBR600 (antithrombotic) and mAbs for adhesion molecular inhibitors
Intas Biopharma	Neukine (G-CSF), Erykine (EPO) and Intalfa (INF-alpha2b)	Six (6) development programs
Prolong Pharmaceuticals	None	PEG-EPO and other PEGylated proteins
Ranbaxy	Nugraf (Filgrastim), Macrogen (Molgramostim from Zenotech)	mAbs in oncology and neurology
Sandoz	Omnitrope (HGH), Binocrit (EPO)	Six (6) development programs including G-CSF (Filgrastim)
Shanta Biotechnics	Shaferon (INF-alpha2b, Shankinase (streptokinase) and Shanpoietin (EPO)	mAbs and PEGylated therapeutic proteins
Stada	EPO-Zeta (approved)	Filgrastim
Teva	G-CSF (Filagstrim),Teva-Tropin (HGH), INF-alpha2b	Insulin, EPO and interleukins
Wockhardt	Wepo (EPO), Wosulin (insulin) INF-alpha2b, G-CSF	Insulin Glargine

Source: Secondary Source, Macquarie Research, June 2008

Fig 36 Zenotech pipeline – biosimilars and oncology



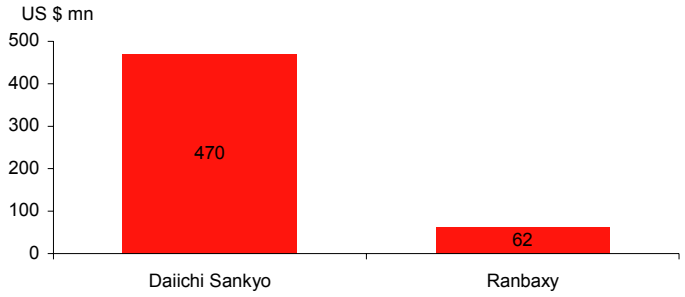
Source: Company reports, July 2008

OTC healthcare business – focus area for both

Daiichi Sankyo has a broad portfolio of OTC products, with FY07A sales of around US$470m. Daiichi Sankyo acquired Astellas' OTC business, Zepharm, in FY3/07 and moved into the top three OTC healthcare businesses in Japan, highlighting this as a focus area. Daiichi Sankyo has set a target of ~US$530m for domestic OTC business by FY09. The "big three franchises" for Daiichi Sankyo are a combination of cold remedy, digestive medicine and dermatological agents.

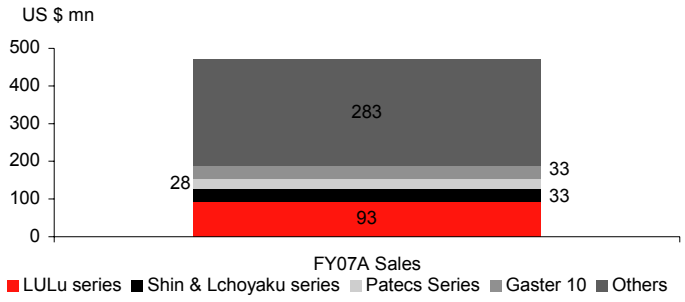
Ranbaxy's global consumer healthcare business registered excellent growth at 41% in FY07, with sales of US$62m globally. The international over-the-counter (OTC) business grew by 57%, registering sales of US$25m. The India OTC business registered a sales growth of 32% to US$37m. We expect Ranbaxy's OTC business to continue growing at a fast pace. We believe synergies on this front could certainly be looked at by Ranbaxy to expand its product offering across the world markets to gain traction and scale in the healthcare OTC business.

Fig 37 OTC sales of the two companies in FY07



Source: Macquarie Research, July 2008

Fig 38 Daiichi Sankyo OTC healthcare portfolio



Source: Macquarie Research, July 2008

Leverage Daiichi Sankyo product portfolio in emerging markets

Ranbaxy has a strong presence in fast-growing emerging markets with 54% of its revenues now coming from these markets. Many of these markets are branded generic and have higher margins if you are an established player. Ranbaxy has spent considerable investment in building infrastructure and a presence in emerging markets of the world.

This is one of the reasons why we believe its current cost structure does not reflect the true picture of profitability. Creating presence requires a substantial upfront investment and it takes time before the product approvals come through and start making those investments viable.

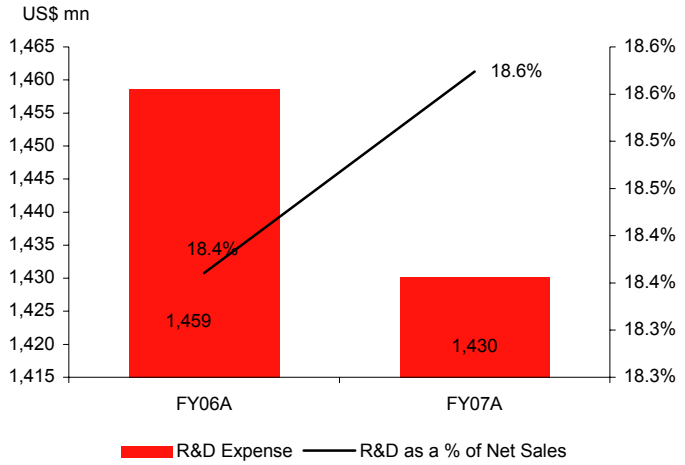
Through this deal we expect Ranbaxy to effectively leverage its emerging market infrastructure for Daiichi Sankyo's product portfolio. Emerging markets are the fastest growing geographies for pharmaceuticals, with projected market size of these countries in the range of US$330–420bn by 2030 from the current US$56bn level.

By effectively utilising Ranbaxy's network, we estimate Daiichi Sankyo can more than double its global reach from the current 21 countries to 56. As business growth slow in mature markets, we believe it puts both companies in strong position to expand business in emerging markets including India, China, Russia and Brazil.

Manufacturing & R&D collaboration

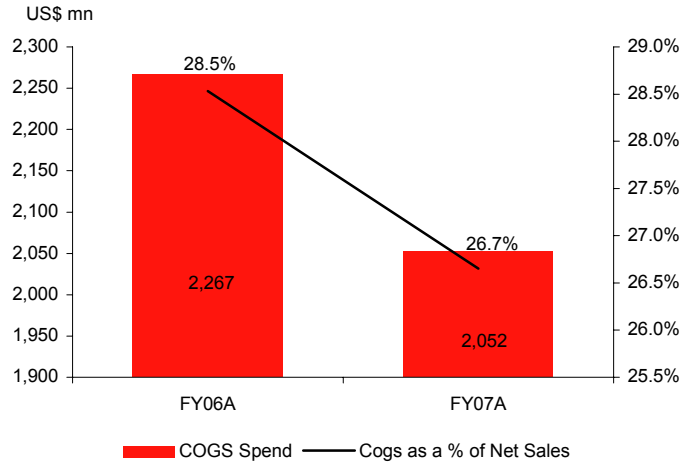
This deal opens up significant opportunity to put in place manufacturing and R&D deals with Daiichi Sankyo to exploit the full potential of Ranbaxy's manufacturing and chemistry skills. Daiichi Sankyo currently spends ~18.5% of net sales on R&D (FY07 ~US$1,430m) and its COGS ratio as a % of sales is 26.7% (FY07 ~US$2,052m).

Fig 39 Daiichi Sankyo R&D expense



Source: Macquarie Research, July 2008

Fig 40 Daiichi Sankyo COGS expense



Source: Macquarie Research, July 2008

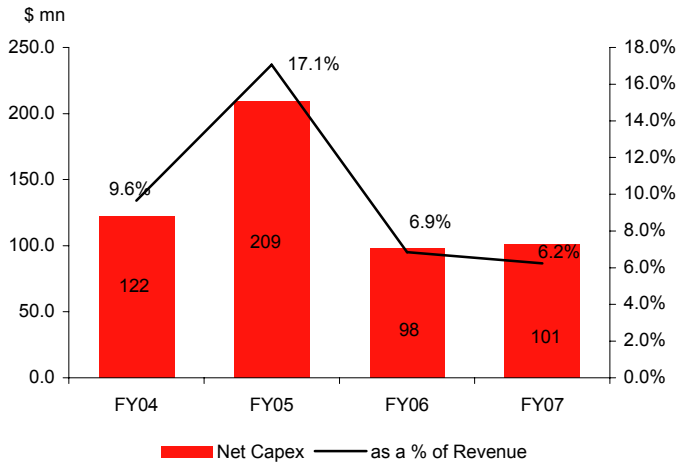
Ranbaxy has strong manufacturing capabilities both in API and formulations. It has six API facilities based in India and 19 formulation facilities in 11 countries including: India, China, US, Romania, Vietnam, Malaysia, Ireland, Nigeria, South Africa, Brazil and Japan.

Ranbaxy invested heavily over the 2004–07 period on capex to build substantial capabilities in manufacturing. Also the upcoming 80acre SEZ facility in Mohali, India, for which all necessary government approvals have been obtained, will further strengthen its manufacturing capabilities and capacity.

Ranbaxy has a strong R&D infrastructure with a pool of 1,400 people of which 300 hold doctorates. The company spent close to US$100m on research last year (25% innovative R&D, 75% generic R&D).

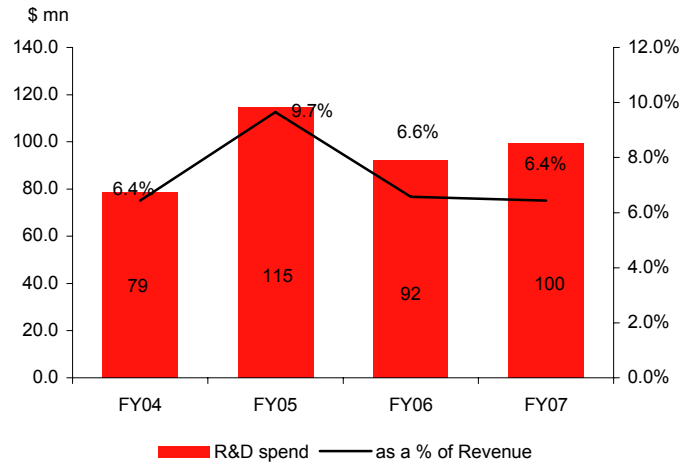
More than 350 people are involved in innovative research, with a focus on metabolic diseases, urology, anti-infective and respiratory. Ranbaxy also has a platform of four new drug delivery systems which it is using to build controlled release formulations.

Fig 41 Ranbaxy investment in capex



Source: Macquarie Research, July 2008

Fig 42 Ranbaxy investment in R&D



Source: Macquarie Research, July 2008

We think this deal can provide substantial synergies in the area of compound synthesis, contract research, contract manufacturing of APIs and drugs for clinical trials, clinical trials, and data management.

As an example, we believe Astra Zeneca's Nexium settlement with Ranbaxy is another good example to illustrate this point, where as part of a settlement Ranbaxy will begin supplying a substantial portion of API supplies for Nexium starting May 2009 and formulation supply starting 2H10.

We estimate outsourcing some of research activities to Ranbaxy could lead to 60–80% savings in salaries for discovery phases and as high as 50–60% in cost per patient in clinical trials.

If we assume Daiichi Sankyo outsourced a conservative 15% of current R&D and COGS expense of ~US$3.5bn to Ranbaxy over the next five years and Ranbaxy does this at 50% of Daiichi Sankyo's cost, this could translate to an opportunity of around ~US$250m in recurring revenue potential for Ranbaxy over the next five years depending on the speed with which the two companies can work on it.

We have not incorporated yet any numbers for the same in our revenue model as we wait for further clarity to emerge from management. Given that contract manufacturing and research assignments come with confidentiality clauses, it may result in low visibility on the potential revenue streams and timelines for investors. However, the stability of revenues and earnings are much higher in contract manufacturing.

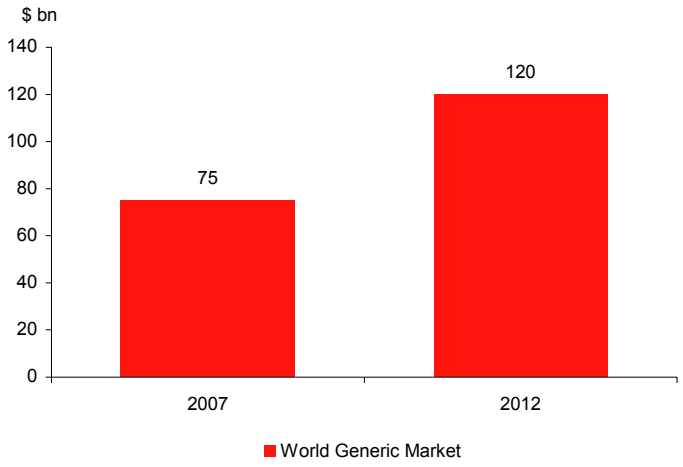
Base business

Scale, presence and changing product mix to drive growth

Generic industry growth fuelled by patent expiry

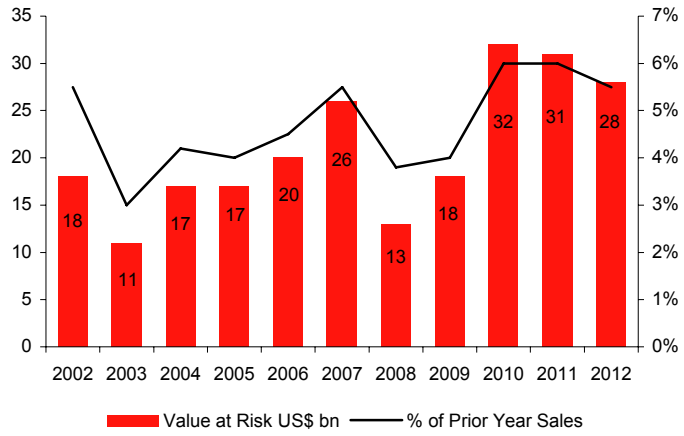
The world generic market is forecasted to reach US$120bn by FY12. Growth will continue to be driven by rising healthcare costs as the elderly population increases, and sustained by a steady stream of patent expiries. According to IMS in the next 4 years, US$109bn worth of branded drugs faces threat from generic competition. We believe Ranbaxy's investment on the front end globally should stand it in good stead to capitalize on this huge patent cliff that the innovators would face 2009–12.

Fig 43 World generic market size



Source: IMS, Teva estimates, Macquarie Research, June 2008

Fig 44 Patent expiry oppportunity

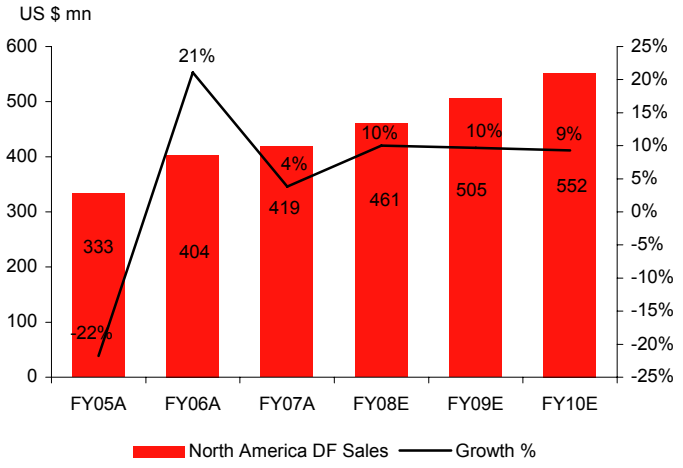


Source: IMS, Macquarie Research, June 2008

North America operations

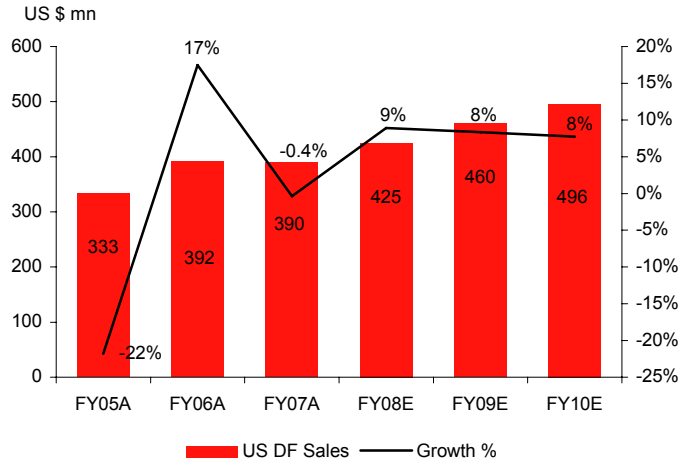
Ranbaxy's North America business contributed US$419m in FY07, ~25% of global sales. The major countries for this region are US and Canada.

Fig 45 North America DF Ranbaxy sales



Source: Macquarie Research, July 2008

Fig 46 US DF Ranbaxy sales



Source: Macquarie Research, July 2008

US operations

We forecast ~ 8.3% CAGR for the US base business (excluding FTF revenues) over FY08–10E. Key growth drivers include:

- Continued volume growth in the existing molecules partially compensating for the value erosion.
- Conservative forecast of ~10 new product launches every year (Ranbaxy has ~ 98 ANDAs awaiting approval, the largest pipeline after Teva).
- Steady growth in the OTC and branded dermatology business (including the acquired dermatology BMS brands).
- Launches arising through the strategic alliances that Ranbaxy has entered (Orchid, Zenotech, IPCA, Jupiter Bioscience) could provide upside to our estimates as these are niche products that see limited competition and hence lower price erosion.

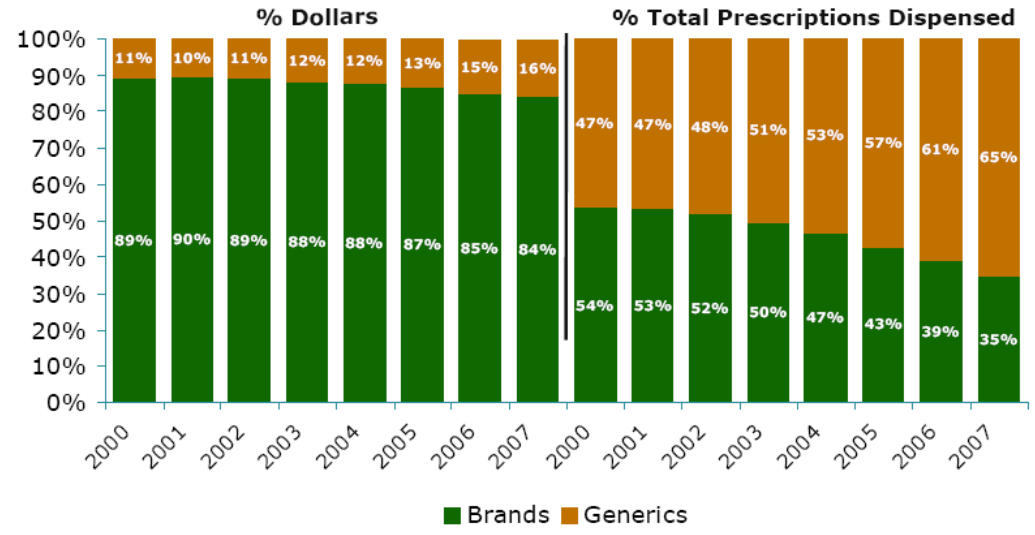
Volume growth, led by increasing generic penetration and patent expiry, will drive growth in the US generic market

The total generic volume share in US pharmaceutical market has now reached 65% and is forecast to reach ~ 80% by 2012 driven by the expiry of some of the biggest blockbusters.

Scale is now becoming increasingly important in the US market with the top four players occupying 55% of the generic market share (Teva, Mylan, Sandoz and Watson). IMS data trends suggest that the price per generic prescription is somewhat stabilising in the US market post the dramatic decline seen in 2005.

We believe volume growth led by increasing generic penetration and patent expiry will drive growth in the US market.

Fig 47 Generic share US market



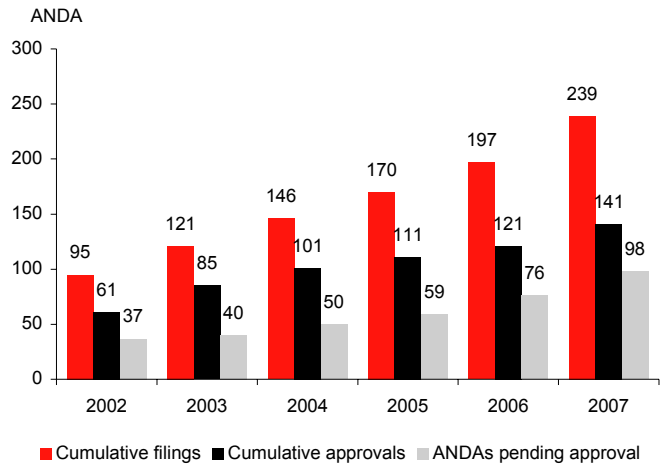
Source: IMS data, Teva Presentation, July 2008

Ranbaxy's marketed portfolio now includes 54 molecules. It has 98 ANDA's pending approval with a brand size of US$54bn.

The ANDA pipeline is second only to Teva in the US which has ~165 ANDA's pending approval, with total brand value of ~ US$101bn.

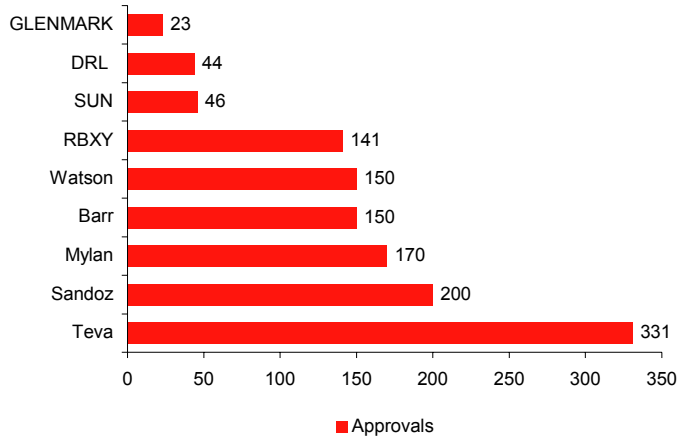
Ranbaxy made 28 ANDA filings during 2007 and received 18 approvals from the US FDA. In addition, 7 ANDA's for injectables were filed with Zenotech and two filings were done with IPCA.

Fig 48 RBXY US ANDA status – target filing 25pa



Source: Macquarie Research, July 2008

Fig 49 Existing portfolio



Source: Macquarie Research, July 2008

Base business in US to benefit from exclusivity as market shares are usually maintained post expiry of 180 days

Ranbaxy has several exclusivity opportunities lined up in the US market, which we believe would even benefit the base business. Historically it has been seen that the leading market share is maintained by the generic manufacturer who launches a molecule with exclusivity, even after the expiry of 180 days.

This bodes well for Ranbaxy's base business which has FTF on products like Lipitor (lipid lowering), Nexium (GI), Actos (diabetes), Valsartan (blood pressure) which are all products for lifestyle-related diseases and leaders in their respective therapeutic category.

Post expiry, we believe these molecules would substantially grow in market size by volume, as:

- Therapeutic substitution is rampant in these categories and as a leader it could eat into the market share of other drugs in the same category.
- The prevalence of lifestyle-related diseases is growing at an increasing rate and hence could further enlarge the opportunity.

Having a dominant market share in these products after 180 days could mean substantial recurring base business sales for Ranbaxy. As an example, for Lipitor alone we believe it is possible that Ranbaxy could generate ~US$150m of recurring business post the expiry of the 180 day exclusivity due to reverse cannibalization of other low efficacy generic statins like Simvastatin and Pravastatin and also to some extent branded Crestor by Lipitor.

Branded derma portfolio along with Flagship product Sotret to deliver robust growth

Ranbaxy is giving a push to its branded generic initiatives in dermatology. Ranbaxy's leading anti-acne product Sotret has greater than 60% market share in US, and it has acquired 13 tail-end dermatology brands from BMS in mid 2007.

With Sotret at the core of the portfolio, this acquisition provides a basket of products for the Ranbaxy Derma sales force to promote along with Sotret. Ranbaxy has doubled its US sales team to promote these products and we believe this enhanced sales focus and further launches in the space will take its dermatology portfolio sales past US$90m by FY10E from US$56m currently.

A strategic partnership with Zenotech has strengthened the oncology injectable portfolio for Ranbaxy. Ranbaxy submitted seven injectable ANDAs in FY07, 15 ANDAs are planned for FY08 in the US market for the Zenotech products. Zenotech plans to launch as many as 50 injectables in the US market over time and this should substantially boost Ranbaxy's hospital sales presence in US.

A recently announced alliance with Orchid gives Ranbaxy a very attractive injectable cephalosporin basket for its US portfolio. We believe the potential revenues from these alliances are underappreciated by the market currently.

Ranbaxy has built in-house capability for penems and limuses which are complex products and hence would face limited competition with lower price erosion.

b) Canada

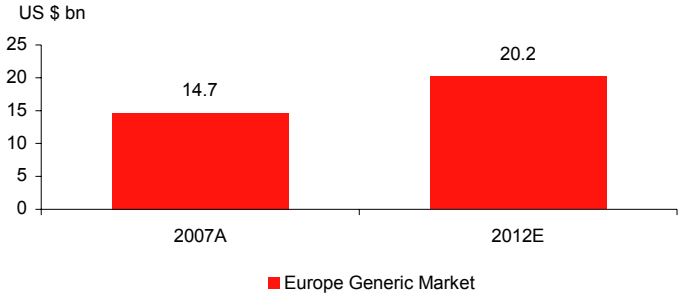
Ranbaxy is currently ranked 9th in the Canadian generics market, in terms of sales. Generics accounted for a value share of 18% of the US$3.2bn Canadian pharmaceutical sales and a 44.5% volume share of the retail prescriptions.

Ranbaxy's current product portfolio in Canada comprises 14 products with cefprozil, Pravastatin and lisnopril being the key products. We expect Canadian sales for Ranbaxy to grow at 25% CAGR until FY10 and reach US$57m by then on the back of increased product approvals and volume growth of existing molecules.

European operations

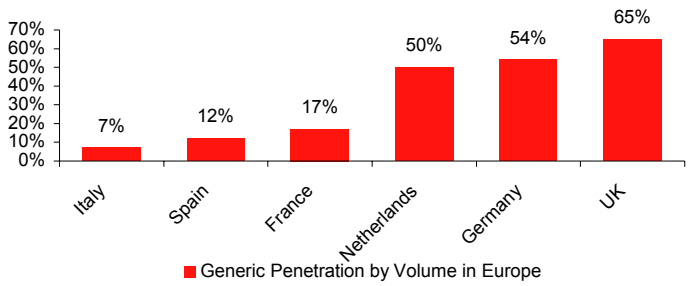
The European generic market was US$14.7bn in size in 2007 and forecasted to grow at 7% CAGR to FY12 to reach US$20bn. Growth is particularly strong in the EU's Latin countries: Italy (+20%), Spain (+15%) and France (+14%), primarily driven by increasing generic penetration.

Fig 50 Europe generic market



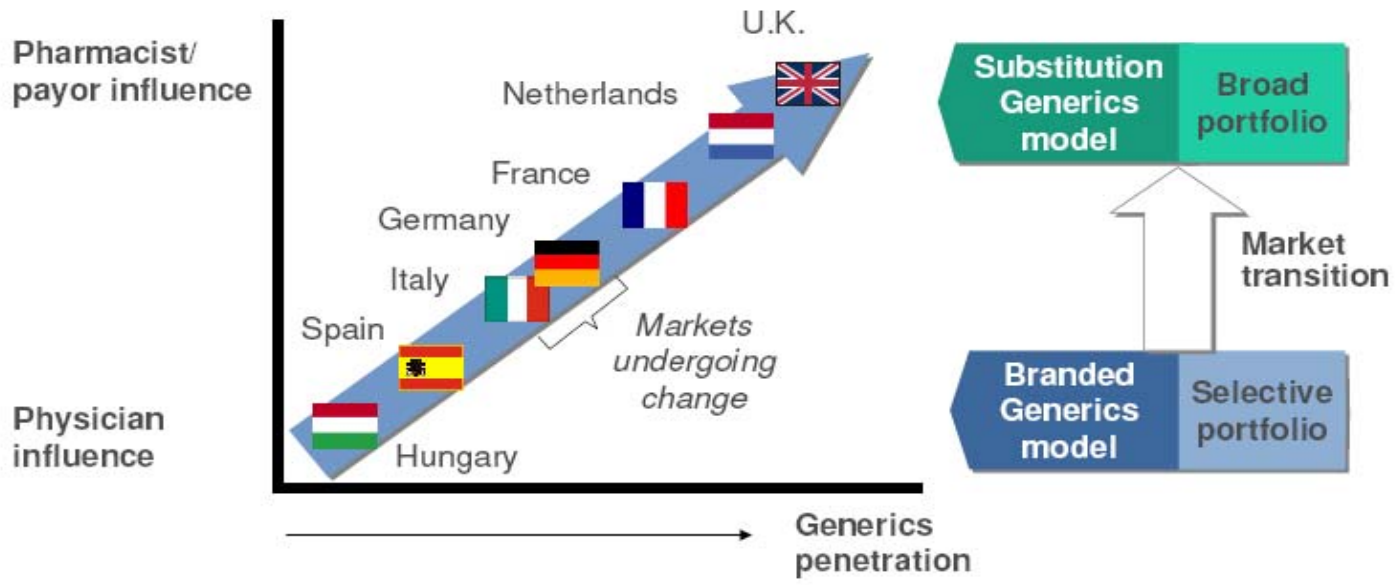
Source: Macquarie Research, July 2008

Fig 51 Generic market penetration by volume



Source: Macquarie Research, July 2008

Fig 52 Changing dynamics of European market

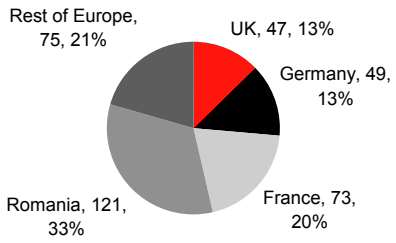


Source:Teva Presentation, July 2008

Ranbaxy has a presence in 23 of the 27 EU countries. Ranbaxy's European business contributed US$365m in FY07~ 22% of global sales.

The major operations are located in Romania, UK, Germany, France and the rest of Europe. We forecast a CAGR of 10% between FY08–10 for European operations reaching sales of ~US$487m by FY10E.

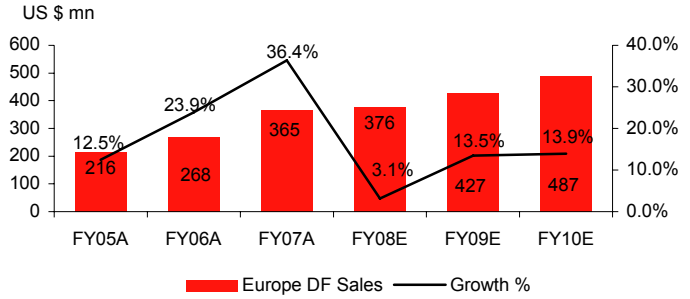
Fig 53 Ranbaxy FY07 Europe sales split (US$m)



Total Ranbaxy Europe sales FY07A were US$365m.

Source: Macquarie Research, July 2008

Fig 54 European DF sales for Ranbaxy



Source: Macquarie Research, July 2008

UK, Germany and France – stable operations

The three major western European markets (UK, Germany and France) contributed 46% of total European sales.

Tenders have become an entry ticket to the world's second largest generics market Germany (~US$5bn), with an increasing shift from branded-generics to a so-called 'generic-generics' market. In Germany, Ranbaxy won 11 products in the AOK (Germany's largest general local health insurance) tender in 2007 and this helped it grow the sales at 69% to reach US$49m.

The western European operations grew sharply in FY07 with 28% growth. We expect the growth momentum to slow in this region due to the government's price reduction initiatives. We have forecast ~ 8% CAGR for Western Europe operations, driven primarily by new launches and volume growth.

Romania – temporary hiccup

Ranbaxy is the No. 1 generic company in Romania, with the largest sales force and a market share of 11.2%. Ranbaxy acquired Terapia in Romania in FY06 for US$324m.

This is key market for Ranbaxy as Romania is expected to emerge as a strategic base for European operations. It is a low-cost pharmaceutical manufacturing location in the western world and has grown at a fast pace of ~30% for the last 5 years. In the last couple of quarters, growth here has been hampered by the uncertainty of proposed healthcare reforms.

The government had been trying to move towards a generic prescribing system, which met with opposition from several quarters. Given this uncertain state of affairs, distributors and wholesalers had chosen to go slow on primary sales, which led to a 29% decline in sales for 1Q FY08.

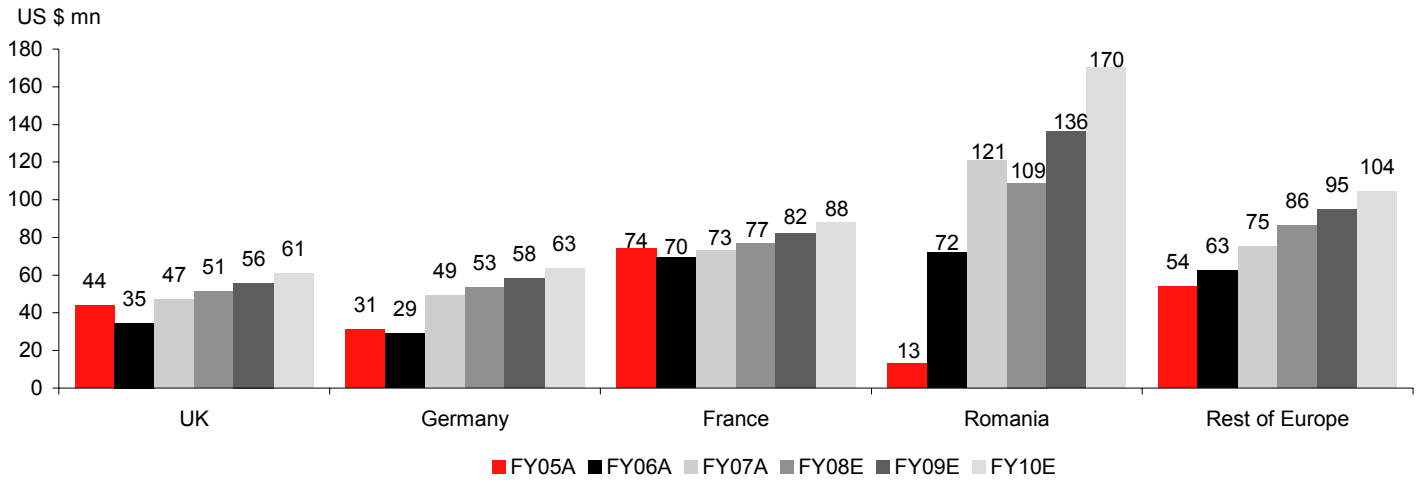
We have forecast a 10% decline in sales for Romania for FY08E due to regulatory uncertainty, but expect Ranbaxy to gain growth momentum next year onwards and reach sales of US$170m from US$121m currently, given its leadership position and a strong manufacturing presence in Romania.

Rest of Europe – broad presence should help

Ranbaxy's strategy of geographical diversification by establishing front-end facilities in a majority of European countries should start reaping benefits as generic penetration increases in these markets. Portugal, Italy and Spain jointly contributed US$22m of total sales in FY07.

Ranbaxy successfully launched 10 new molecules in the Italian market including the day-1 launches of Simvastatin, Loratadine and Finasteride. With increasing product launches, generic penetration and streamlining of operations from strategic manufacturing hub Romania, we expect sales from the rest of Europe to grow at a CAGR of~ 11% between FY08–10.

Fig 55 Europe country sales forecasts



Source: Macquarie Research, July 2008

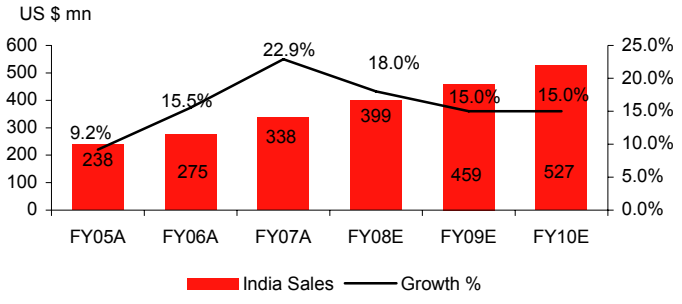
Domestic operations – leadership role

Ranbaxy has consistently been among the top three players in the domestic Indian market. For the month of May-08 Ranbaxy displaced Cipla as the market leader with 5.2% market share according to IMS-ORG. The key therapeutic categories for Ranbaxy are anti-infective, cardiac, pain management, derma, and gastro.

Ranbaxy has nine brands in the Top 100 list in the Indian market and its chronic franchise now accounts for 24% of total sales, versus 21% in 2006. Ranbaxy has been enriching the domestic portfolio mix by in-licensing products and launching NDDS products with its proprietary drug delivery platforms and these now contribute 9% of the total sales with market share of 7% in the category. In 1Q08, Ranbaxy increased its sales team by ~25% by adding 550 people to the domestic sales team of 2,200.

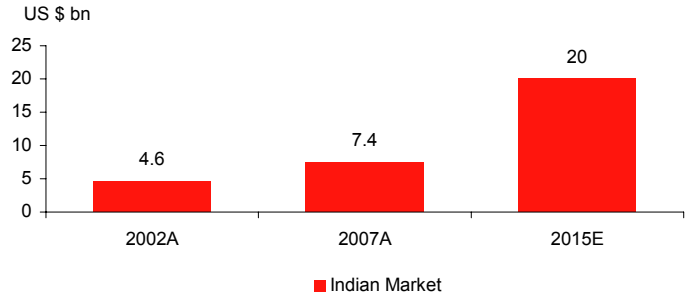
We believe Ranbaxy will continue to deliver high growth in the Indian market and expect Ranbaxy to grow at a CAGR of at least 16% for the period FY08–10E.

Fig 56 Ranbaxy domestic sales



Source: Macquarie Research, July 2008

Fig 57 Indian pharmaceutical market



Source: Macquarie Research, July 2008

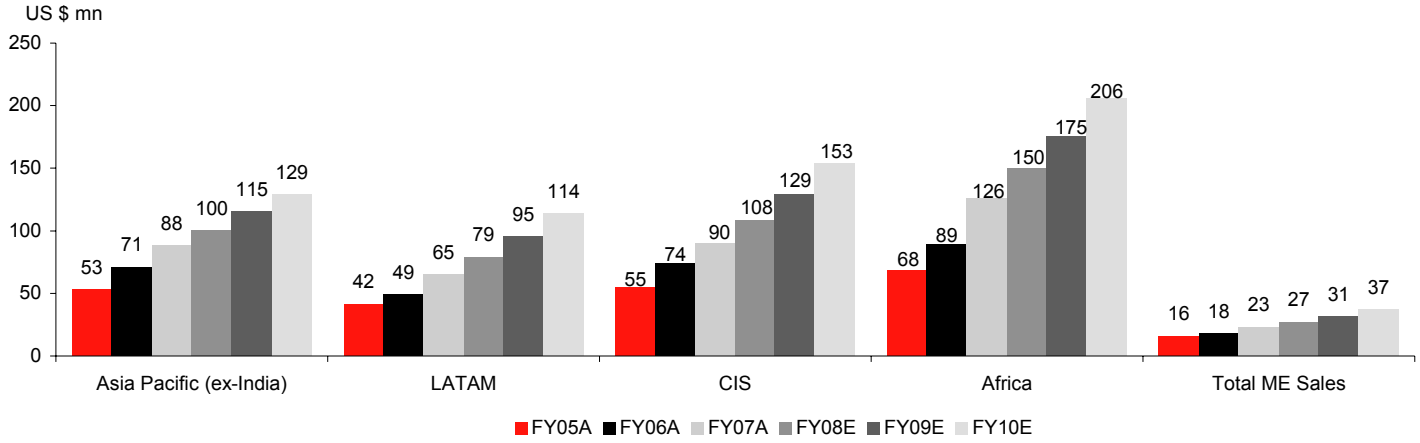
Africa, CIS, Middle East, Asia Pacific, Latin America – ride the market growth

Ranbaxy has a formidable footprint in most of the key markets in these regions, a strategy which has often been criticised for causing Ranbaxy to spread itself too thin. However, we believe the investment made over the years to enter different geographies, even sacrificing near term profits, will hold Ranbaxy in good stead to capture share in these fast growing, high margin markets as new products are launched.

The majority of these markets are branded generics markets and the margins are better than in the more mature western markets.

These geographies have recently witnessed strong growth, reflected in the FY07 growth rates of 22% in CIS, 42% in Africa, 24% in Asia Pacific, 32.7% in LatAm and 28% in the Middle East. We believe these geographies will continue to grow by 18–20% over the medium term on the back of increased product flow, expanding market size and low base.

Fig 58 Rest of the world markets



Source: Macquarie Research, July 2008

Strategic alliances – undervalued

Ranbaxy has lately pursued the strategy of acquiring stakes in domestic Indian companies with a presence in oncology, biogenerics, peptides and injectables to strengthen its portfolio mix. In our opinion the potential of this strategy is not yet fully appreciated.

Key stakes

- **Orchid:** Ranbaxy has acquired a 14.9% stake in Orchid, which specialises in cephalosporin injectables and a business alliance has been formed. Ranbaxy intends to leverage Orchid's expertise in the cephalosporin injectables segment to further strengthen its anti-infective portfolio.
- **Zenotech:** Ranbaxy increased its stake in Zenotech to ~47%. This provides partnership in the two key therapy areas of oncology and biogenerics, which we believe hold immense potential.

  Over US$21bn of the global biopharmaceuticals segment is expected to go off patent in the next 4–5 years. Similarly, the global oncology market also offers a significant opportunity and is worth over US$35bn at innovator price. Zenotech has approval for three biotech products in India.

  Ranbaxy intends to file ANDA's (7 filed in FY07, 15 planned for FY08) from Zenotech's facility and is also in the process of applying for registration of bio-generic in the EU. Given that the company has started filing ANDA's and applying for registrations, revenues are expected to flow from FY10.
- **Jupiter Bioscience**: Ranbaxy currently holds a 15% stake in Jupiter. Jupiter specialises in the manufacture of peptides and specialty chemicals. Ranbaxy has signed a semi-exclusive marketing agreement to commercialise five generic peptide drugs.

- **R&D contract with GlaxoSmithKline (GSK) and Merck:** A key strategy for Ranbaxy involves partnering with MNC's and it has already formed partnerships with GSK and Merck.

  The COPD molecule in partnership with GSK has entered Phase I. Ranbaxy will be entitled to milestone payments at different phases along with royalties upon commercialisation. In our view, the milestone payments would be largely back-ended and mostly linked to the commercialisation of molecules. We do not assign any value for this in our valuation.

However, Ranbaxy currently spends ~ US$25m annually for innovative initiatives and we believe the same amount would start to be monetised gradually in partnership with Daiichi Sankyo.

EBITDA margin – steady improvement

We model 250bp of EBITDA margin expansion over FY08–10E as we believe Ranbaxy would benefit from:

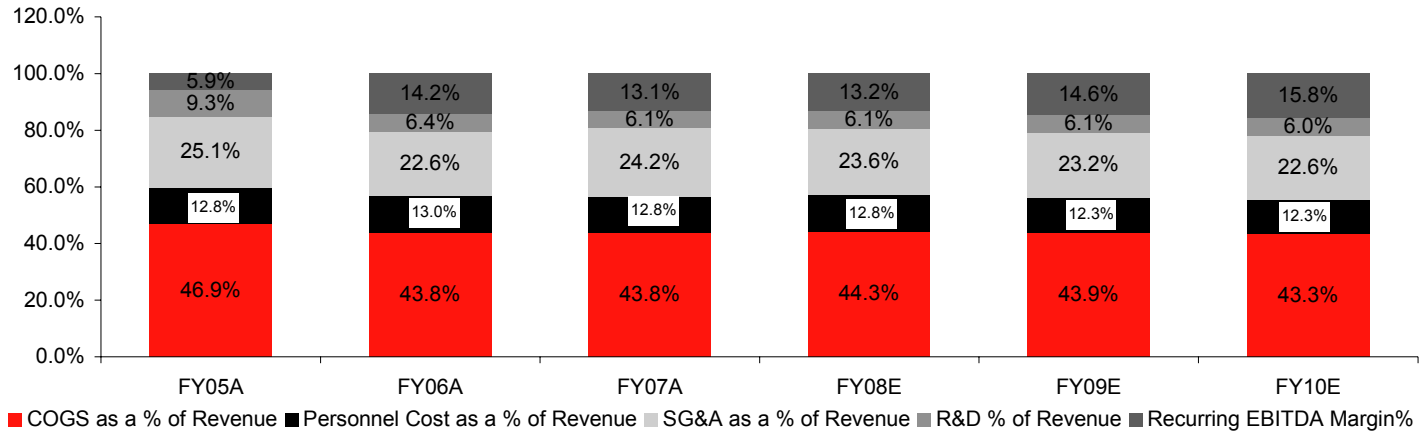
- Increasing emerging market revenue.
- Operating leverage due to high fixed cost structure should mean higher margins during strong revenue growth.
- Earlier acquisitions made by Ranbaxy (Terapia, Be-tabs) have higher EBITDA than Ranbaxy.
- Gradual improvement in portfolio mix with launch of oncology injectables, limuses, penems etc. which are difficult to manufacture and hence would see limited competition resulting in high margins.

SG&A should provide operating leverage: A significant part of Ranbaxy's incremental SG&A was incurred to expand into new geographies. Excluding the incremental SG&A spent in new areas, SG&A has witnessed marginal growth over last few years. With expansion in most countries now behind us, we believe Ranbaxy will be able to keep overall cost structure growth rates muted, and hence deliver sustained margin expansion. We believe the EBITDA margin will expand thanks to slowing growth in SG&A relative to sales.

R&D expenditure to grow in line with revenue: We believe Ranbaxy will continue to invest significant sums of money in R&D given the need for continued high spend on generic R&D to maintain a robust pipeline of ANDA filings. We forecast R&D expenses to increase in line with revenue in next 2–3 years. We have also not excluded the US$25m spend on innovative R&D expense.

Overall, we expect the EBITDA margin to improve in coming years on the back of operating leverage due to slowing growth in SG&A, the change in market mix with the increase in emerging market revenue, and an improving product portfolio mix with launch of value-added generics. We forecast EBITDA margin to expand to 15.8% by FY10E.

Fig 59 Ranbaxy cost structure



Source: Macquarie Research, July 2008

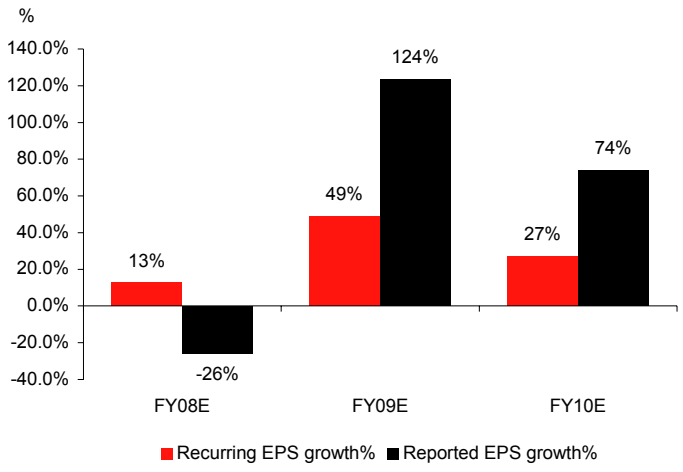
Golden phase for Ranbaxy – 2009–14

We expect recurring earnings to increase by 13%, 49% and 27% in FY08E, FY09E and FY10E respectively.

Reported earnings, driven by exclusivity revenues are expected to increase to by 124% and 74% in FY09E and FY10E, but decline by 26% in FY08E (we have not assumed any translation or hedging gains in FY08E).

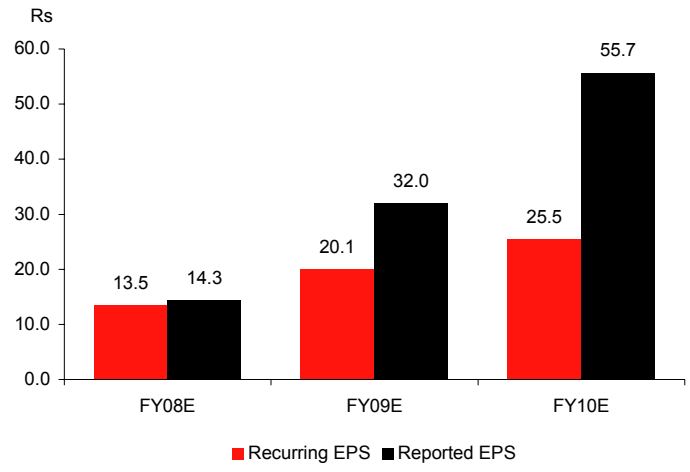
The translation loss in FY08E due to the FCCB will drive the reported earnings further down, but we have treated this as an exceptional item throughout.

Fig 60 EPS growth estimates



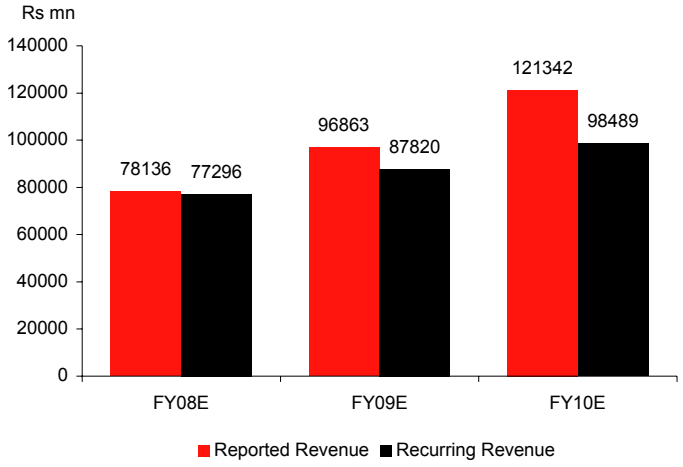
Source: Macquarie Research, July 2008

Fig 61 Forecast EPS



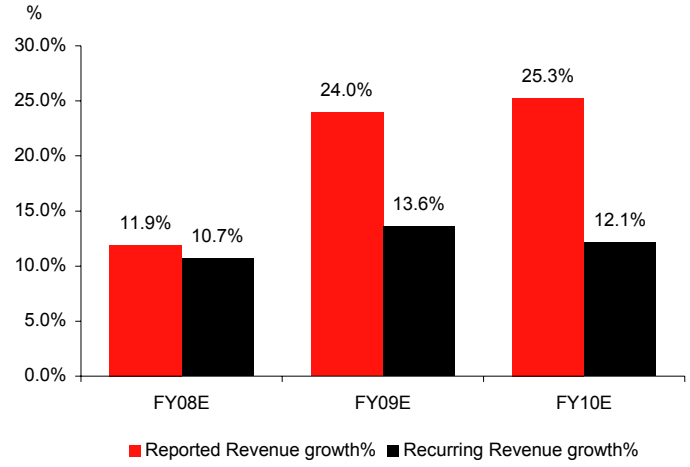
Source: Macquarie Research, July 2008

Fig 62 Forecast revenue



Source: Macquarie Research, July 2008

Fig 63 Revenue growth



Source: Macquarie Research, July 2008

Exclusivity bonanza

Ranbaxy has by far the best first-to-file portfolio in the industry

Para 4 pipeline

Para 4 fillings are when a generic company files an application with an FDA stating that the patents listed for a product is not valid or the company product is non-infringing.

Ranbaxy has 33 Para 4 ANDAs pending approval in US. Of these it has first-to-file status in 18 ANDAs, with total brand value sales of FTF opportunities close to US$27bn.

Ranbaxy's value of FTF per file is almost twice that of Teva

As the leader of the pack Teva boasts 49 FTF Para 4 applications with total brand value of the same close to US$40bn.

Despite having a lower number of FTF than Teva, the brand value of the opportunity per file for Ranbaxy (US$1.5bn / file) is almost twice Teva's (US$800m / file). In our view, this reflects the acumen with which Ranbaxy has been able to capitalise the blockbuster opportunities with the limited resources at hand, compared to Teva.

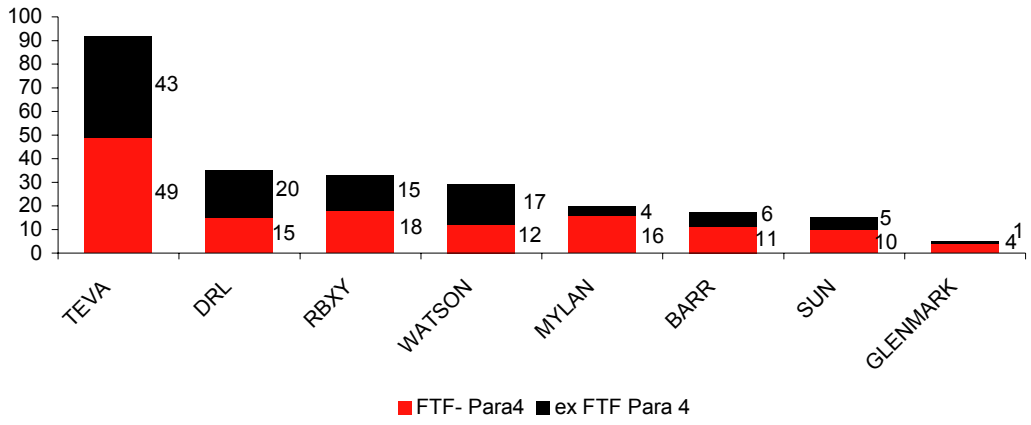
Ranbaxy has FTF status on two of the top 10 drugs by global sales, Lipitor and Nexium, and both have been settled with the respective innovator.

Fig 64 US ANDA pipeline comparison with Teva

	FTF	Brand value (US$bn)	Brand value (Per FTF US$bn)
TEVA	49	~ 40	0.796
RBXY	18	27	1.500
	ANDA pending Approval	**Brand value US$bn**	**Opportunity/File US$bn**
TEVA	160	103	0.644
RBXY	98	54	0.551

Source: Macquarie Research, June 2008

Fig 65 US Para 4 ANDA pipeline – Key peers



Source: Macquarie Research, June 2008

Exclusivity pipeline currently undervalued by the market in our opinion

Given the series of failures faced by Indian generic players in their para 4 challenges over the last few years, the embedded value of these assets was completely ignored by the market until recently. To improve its launch visibility, Ranbaxy has recently adopted the strategy of de-risking the FTF Para 4 pipeline through a series of settlements with the innovator companies.

These settlements help lower the upfront litigation expense, remove the uncertainty with regards to launch date, lead to better planning of inventory and launch quantities and also lower the risk of any damage payments later. On top of this, pre-launch settlement provides Ranbaxy with assured 180-day exclusivity in the US market from a mutually agreed day.

Although an authorised generic (AG) is possible if not explicitly ruled out in the settlement, an AG is unlikely to compete as aggressively in a settlement situation relative to a competitive launch. This partially helps to offset any time decay, if the launch date is temporarily pushed back.

Decoding the option value of the FTF pipeline for Ranbaxy

Ranbaxy continues to pursue a strategy of effectively leveraging and monetising its pipeline of FTF opportunities. We have valued the exclusivity opportunities separately and discounted the six months profit at 12.5% to arrive at net present value per share. As the exclusivity opportunities are one-time events, we think it is better to value them separately to the base business.

Lipitor and Caduet exclusivity launch valued at Rs37 per share

Ranbaxy settled the patent litigations involving Lipitor (Lipitor's FY07 worldwide sales were US$12.6bn) with Pfizer. Ranbaxy will have a licence to sell generic versions of Lipitor (US sales US$7.5bn) and Caduet (US sales US$400m) in the US effective 30 November 2011.

The agreement also allows Ranbaxy to sell generic versions of Lipitor 2–4 months in advance of the patent expiry in Canada, Belgium, Netherlands, Germany, Sweden, Italy and Australia.

Ranbaxy previously lost the case on the '893 patent expiring in March 2010. However, it had a favourable ruling on the '995 patent expiring in June 2011. Because it was the first to file, Ranbaxy is entitled to six months' exclusivity.

In addition, there is a combination patent for Caduet that expires in 2018. As a result of the settlement, Pfizer will allow Ranbaxy to launch before the expiry of '104 and '156 formulation patents; hence, we believe it is likely that regulators will allow such a deal to go through. Patents '104 and '156 are various processes and crystalline form patents, which expire in 2016 and 2017.

All patent litigation between Ranbaxy and Pfizer relating to Accupril in the US and Viagra in Ecuador has also been resolved.

Fig 66 Launch estimate ROW markets

Countries	Comment
European Countries	Launch 2-4 months before Sept-2011. If the PED exclusivity is granted it will be Mar-2012.
Canada	Launch 2 months before the patent expiry. (Jul-2010 Patent.)
US	Launch of Lipitor and Caduet in Nov-2011
Australia	Launch 2-4 months before Feb-2012 patent expiry

Source: Macquarie Research, June 2008

The combined sales of Caduet and Lipitor in the US market totalled US$8bn in FY07. Based on our estimates, this translates to roughly US$880m sales in 20011-12 for Ranbaxy in the US market alone assuming:

We value the global Lipitor and Caduet settlement at Rs37 per share

(a) 50% price erosion and 50% Ranbaxy market share; Lipitor sales decline of 5% YoY until 2011 and modest Caduet sales growth of 10% YoY until 2011 with an authorized generic present. As mentioned previously, an AG is unlikely to compete as aggressively in a settlement as against a competitive launch.

(b) If we assume 15% operating costs and a ~20% tax rate, this translates into net profit of US$590mn one time in 2011–12. Discounting this at around 12.5% pa we arrive at a NPV per share of ~ **Rs33.4** for the US Lipitor and Caduet opportunity.

Ex-US, Lipitor sales for the countries covered in the settlement are worth close to US$2.5bn, of which Canada accounts for US$800m. Assuming the launch takes place two-months prior to the patent expiry and given similar assumptions to the US market, this translates to an estimated US$100m in sales between FY10–12, with profits of ~ US$60m during that time frame. Discounting this at around 12.5% pa, we arrive at an NPV per share of **Rs3.9** for the ROW sales of Lipitor included in the settlement.

Nexium exclusivity launch and settlement valued at Rs37 per share

Ranbaxy settled the Nexium litigation with AZN. Under the terms of agreement:

Nexium settlement including supply agreement and FTF valued at Rs37 per share

a) Ranbaxy will launch the generic version of Nexium under a licence from AstraZeneca, on 27 May 2014.
b) Ranbaxy will be the only company to market this product with 180 days exclusivity in the US market.
c) Ranbaxy will formulate a significant portion of AstraZeneca's US supply of Nexium from May 2010, including provisions for the manufacture of Esomeprazole magnesium, the active pharmaceutical ingredient (API) from May 2009.
d) Ranbaxy has been designated as the US distributor for the authorised generic versions of Felodipine capsules (for hypertension) and Omeprazole 40mg tablets (for acidity). Ranbaxy management has indicated that the deal could bring in revenues of about Rs5,000–Rs6,000 over the 2009–14 period.

Based on the assumptions below, we arrive at estimated cumulative sales of US$1.29bn for Ranbaxy between 2009–14 and a total NPV per share of Rs36.3.

a) Ranbaxy to supply about 50% API and about 30% of formulations of the US Nexium requirements, starting from May FY09 and May FY10 respectively;
b) revenue estimated at 5.5% of the end sales for the supply agreement (50% of 5% API cost and 30% of 10% DF cost);
c) Operating cost at 45% during the supply agreement and 15% during exclusivity.
d) No authorised generic
e) 70% market share for Ranbaxy and 30% price erosion during the 180 day exclusivity period starting 27 May 2014;
f) 20% tax rate.

AG settlement for Plendil and Prilosec valued at Rs1 per share

Along with this agreement, Ranbaxy also received AG distribution rights for two other products: **Prilosec 40mg** (Omeprazole, US sales of US$200m) and **Plendil** (Felodipine ER, US sales of US$240m).

- For Prilosec Watson, has 180 day exclusivity. We arrive at an NPV of Rs0.2 for this opportunity assuming: a) Ranbaxy will launch in 4Q08, with operating cost of 80% and a 20% tax rate; b) Ranbaxy's AG will garner 30% market share with 50% price discount.
- Plendil currently has one generic in the market, which has been in the market for more than two years, and has captured market share greater than 90%. Post-genericisation, the size of the market will still be around US$240m. Due to the high manufacturing barrier, limited competition is expected to continue. We arrive at an NPV of Rs0.8 for this opportunity assuming: a) Ranbaxy will launch in 2Q09, with operating cost of 80% and a 21% tax rate; b) Ranbaxy's AG will garner 25% market share with a 50% price discount to current prices.

Imitrex exclusivity launch in 4Q FY08 valued at Rs4.2 per share

Imitrex settled with GSK. Shared exclusivity. Launch in Dec-08. We value it at Rs4.2 per share

We estimate the NPV per share of the Imitrex exclusivity at Rs4.2. Under the terms of the settlement with GSK, Ranbaxy may distribute a generic version of Sumatriptan Succinate tablets (25 mg, 50 mg and 100 mg strengths) in the US with an expected launch date in December 2008.

DRL (DRRD IN) was the FTF on the base patent and Ranbaxy was on the formulation patent. GSK has settled with DRL giving it authorised generic rights with a launch in 4Q08 before the expiry of basic patent in Feb-2009. Earlier, Cobalt had also settled the case with GSK and according to the settlement, it expects to launch in 1Q FY09.

Since it is a shared exclusivity, we estimate a 30% market share for Ranbaxy with 50% price erosion during the 180 day exclusivity. With these assumptions, we estimate Imitrex to generate Rs3,150m sales and Rs2,140m profit for the company during the exclusivity period.

Flomax exclusivity launch in Mar FY10 valued at Rs10.6 per share

RBXY settled with Astellas for Flomax. Launch in March-10. We value it at Rs10.6 per share

Ranbaxy reached an agreement with Astellas/Boehringer Ingelheim (4503 JP, Not Rated) to settle the lawsuit in the US that was related to US Patent No. 4,703,063 ('063 patent), covering Tamsulosin and its use in the treatment for functional symptoms of BPH (benign prostatic hyperplasia).

Under the agreement, Ranbaxy will enter the US market on 2 March 2010, eight weeks prior to expiration of the pediatric exclusivity, which is likely to be granted to the innovator company. During this time period of PED exclusivity, Ranbaxy will be the only generic manufacturer to commercialise this product in the US market.

Given the 2-month head start, we have assumed 60% market share for Ranbaxy and 40% price erosion which we believe is conservative. This translates to an NPV of Rs10.6 per share for Flomax exclusivity, assuming 15% operating costs and a 20% tax rate. With these assumptions, we estimate Flomax will generate Rs9,086m sales and Rs6,180m profit for the company during the exclusivity period.

Valtrex exclusivity launch in Dec FY09 valued at Rs11.8 per share

Valtrex settled with GSK, Launch in late 2009, valued at Rs11.8 per share

at Rs8.4 per share with 70% probability adjusted sales

Ranbaxy settled with GSK the US litigation with regard to Valtrex US patent no. 4,957,924, covering Valacyclovir Hydrochloride and its use in the treatment of the herpes virus infection.

Under the agreement, Ranbaxy will enter the US market in late 2009 and as the first generic, the company will enjoy 180 days exclusivity. Ranbaxy has also obtained a licence to GSK's US patent nos. 5,879,706 and 6,107,302, listed in the Orange Book (US FDA Document) for Valacyclovir.

We have assumed 60% market share for Ranbaxy and 40% price erosion during the exclusivity period. This translates to an NPV of Rs11.8 per share for Valtrex exclusivity assuming 15% operating cost and a 20% tax rate. With these assumptions, we estimate Valtrex will generate ~ Rs9,400m sales and ~ Rs6,490m profit for the company during the exclusivity period.

Potential Actos exclusivity launch in FY11 valued at Rs8.4 per share

The appeals court in US held the basic product patent 4,687,777 (the '777 patent') for Actos (Pioglitazone), valid expiring on 17 January 2011. Takeda filed patent infringement actions against Mylan, Ranbaxy and Watson Pharmaceuticals, in Oct-03, and against Alphapharm in March-04, in response to the filing of Para 4 ANDAs with the FDA under provisions of the Hatch-Waxman Act, challenging certain of Takeda's listed patents, including US patent no. 4,687,777.

Alphapharm and Mylan were the only defendants to challenge the '777 patent and they have lost this case. The court's ruling prevents the FDA from approving the ANDAs filed by Alphapharm and Mylan, and thus prevents those generic manufacturers from selling pioglitazone tablets until the '777 patent expires, in 2011.

Other US patents covering certain methods of treatment using Actos and certain compositions that include Actos will expire in 2016 (the last is on 9 August 2016). We expect Ranbaxy to launch in 2011 post the expiry of the basic patent with shared exclusivity.

We have risk adjusted the sales with a 70% probability of launch. Assuming a 50% price discount, 30% market share, 15% operating cost and 20% tax we arrive at an NPV of Rs8.4 per share for Actos given shared exclusivity. With these assumptions, we estimate Actos will generate Rs7,800m sales and Rs5,500m adjusted profit for the company during the exclusivity period.

Potential Diovan exclusivity launch in FY12 valued at Rs6 per share

Novartis had sued RBXY claiming infringement on '578 patent (which expires in September 2012), but not on '197 patent (exp 2017) for tabs 40, 80, 160, 320mg.

The case was dismissed following Ranbaxy's conversion of its Para 4 to Para 3. Ranbaxy was the first to file a Para 4 challenge on the '197 patent as well. Hence we anticipate it will get exclusivity for 180 days post September 2012 once the basic '578 patent expires.

We have risk adjusted the sales with a 70% probability of launch. Assuming a 50% price discount, 55% market share, 15% operating costs and a 20% tax rate we arrive at an NPV of Rs6 per share for Diovan exclusivity. With these assumptions, we estimate Diovan to generate Rs6, 560m sales and Rs4,500m adjusted profit for the company during the exclusivity period.

Potential Aricept exclusivity launch in FY10 valued at Rs6.2 per share

The no inequitable conduct challenge to a patent is notoriously hard to win because it requires the challenging company to prove the intent of the patent holder.

Preliminary injunction (PI) against Teva on Aricept was granted to Eisai to prevent an at risk launch. Teva has dropped the obviousness claim and is now only contending the patent '841 is not enforceable on grounds of inequitable conduct.

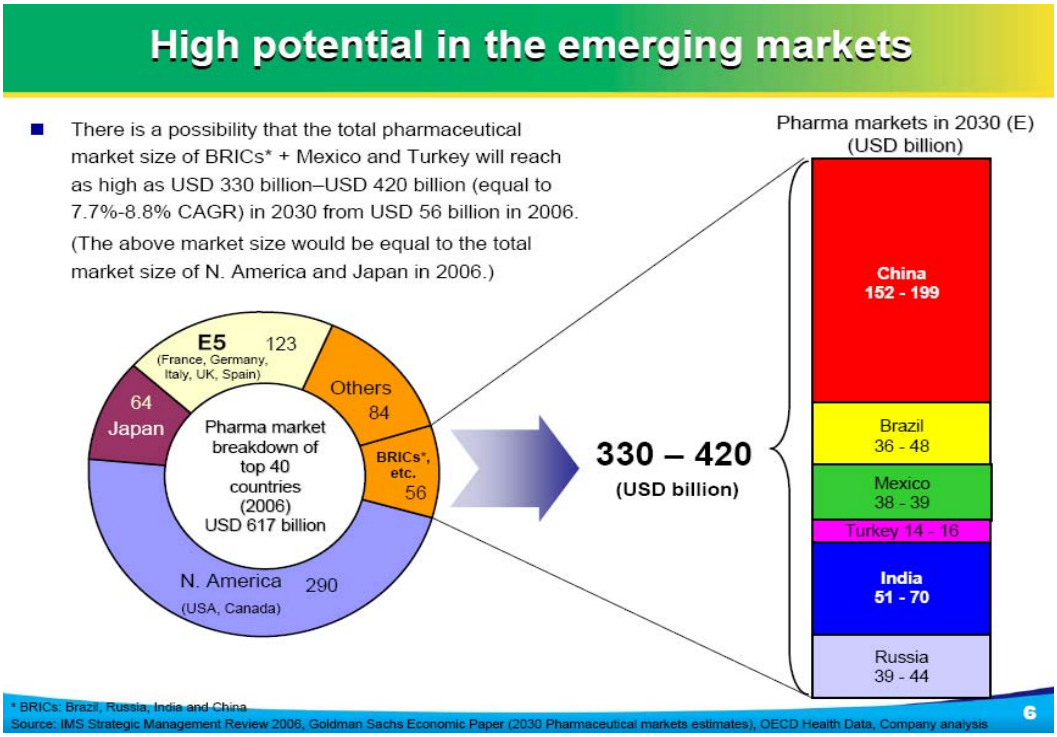
The no inequitable conduct challenge to a patent is notoriously hard to win because it requires the challenging company to prove the intent of the patent holder. This increases the likelihood of Eisai being able to defend the November 2010 '841 composition of matter patent. If Teva losses the 841' patent, Ranbaxy has the FTF Para 4 on all patents apart from the '841 composition of matter patent on which it had filed a Para 3 application.

The rest of the patents are formulation or process patents and Eisai has not sued on these. If Teva losses the 841' patent, Ranbaxy might enjoy 180 day exclusivity starting at the end of 2010. We have risk adjusted the sales with a conservative 50% probability of launch. Assuming a 40% price discount, 55% market share, 15% operating costs and a 20% tax rate we arrive at an NPV of **Rs6.2** per share for possible Aricept exclusivity. With these assumptions, we estimate Aricept will generate Rs5,700m risk adjusted sales and Rs3,900m risk adjusted profit for the company during the exclusivity period.

Appendix 1

Emerging market and top ten generic markets of the world

Fig 67 Emerging market focus – Why is it necessary?



Source: Daiichi Sankyo company presentation, June 2008

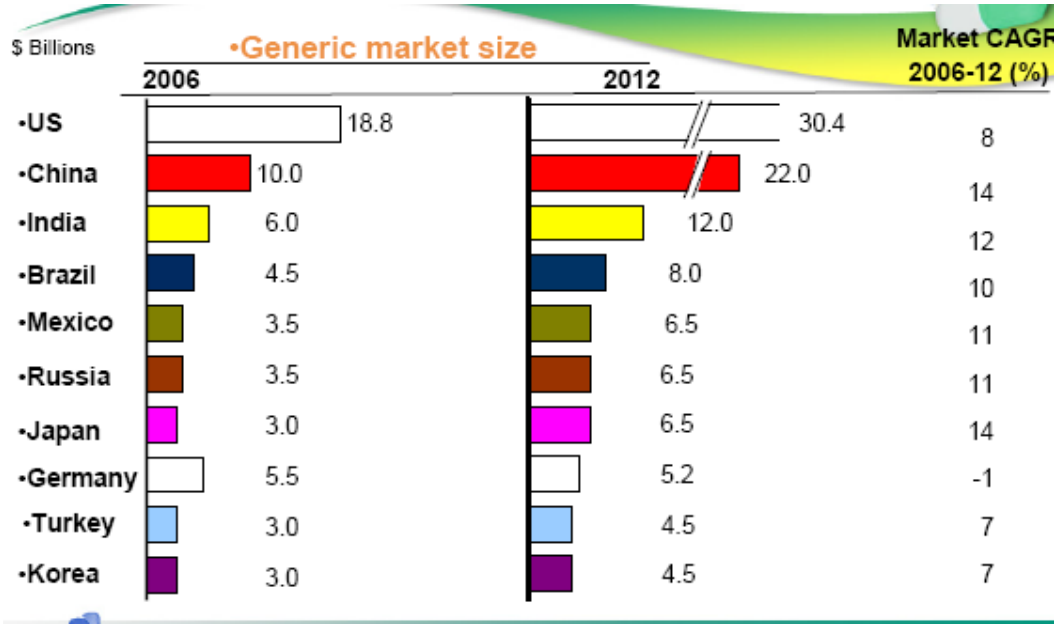
Fig 68 Historical growth rates of market size of emerging market

Name	Market size (USD billion)		CAGR
	2007	2002	(%, 02-07)
China	14.2	6.1	18.4
Brazil	10.3	5.1	15.4
Turkey	9.4	3.4	22.7
Mexico	8.7	8.0	1.7
India	7.4	4.6	10.1
Poland	5.8	3.0	14.3
Russia	5.5	1.5	28.8
Venezuela	3.3	1.5	17.1
Argentina	2.7	1.3	15.3
Hungary	2.7	1.2	17.3
Romania	2.4	0.6	30.3
Indonesia	2.3	1.4	11.1
South Africa	2.2	0.9	18.3
Sum of Top 13 countries	76.9	38.6	14.8

*Daiichi Sankyo currently does not have any subsidiaries in the countries colored in red

Source: Company reports, June 2008

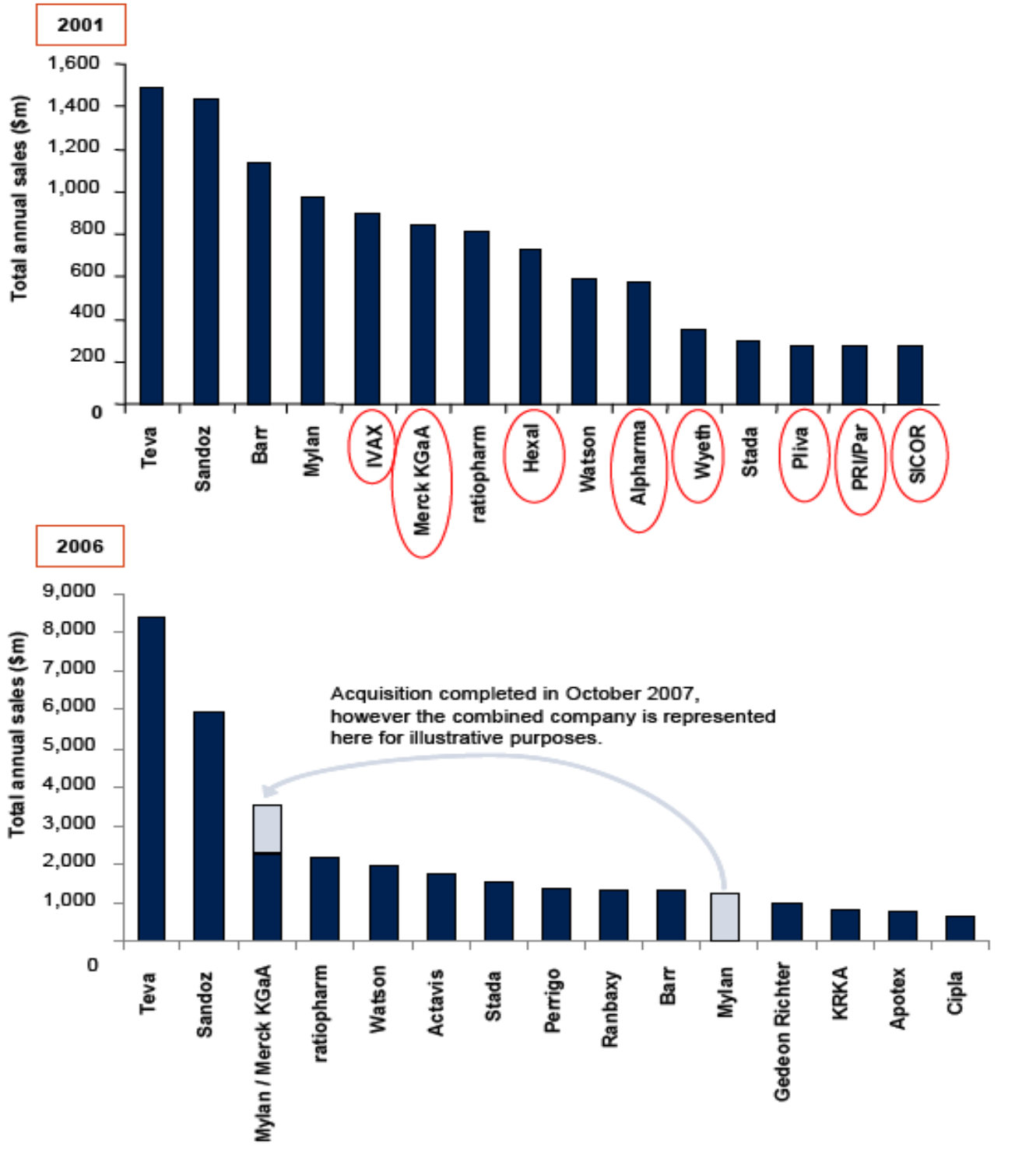
Fig 69 Top ten generic markets of the world



Source: Teva Presentation, Feb 2008

Appendix 2

Fig 70 Changing the scale in the global generic space



NB Circled companies have been acquired during 2001–06; Using 2006 sales as last full year of data available

Source: Data Monitor Publication, December 2007

Appendix 3

FTF pipeline summary table

Fig 71 Exclusivity summary table

Product	Brand Sales est. US$m	Case Status	Launch	NPV Rs Per Share	Comments
Sumatriptan GSK (Imitrex)	1,000	Ranbaxy settled with GSK. DRL is the authorized generic for Imitrex. DRL, Par, Cobalt and RBXY have shared exclusivity.	Dec-08	4.2	FTF for DRL on base patent/ for RBXY on formulation patent. GSK has settled with DRL giving it authorised generic rights with launch in 4Q08 before the expiry of the basic patent in Feb-2009.
Valacyclovir GSK (Valtrex)	1,300	Ranbaxy settled with GSK. Ranbaxy is the only player with FTF status	Dec-09	12	30-month stay has expired and tentative approval received. Launch now expected in late 2009 after the PED exclusivity on GSK's basic patent (4957924), which expires in June-09 (excl PED exclusivity).
Tamsulosin BI*/Astellas (Flomax)	1,200	Ranbaxy settled with Astellas / BI Ranbaxy is the only player with FTF status	Mar-10	11	Patent expires on 27 October 2009. Adding paediatric exclusivity launch in Mar-2010, 2 months before PED exclusivity.
Atorvastatin Pfizer (Lipitor)	7,600	Ranbaxy settled with Pfizer. Ranbaxy is the only player with FTF status. Ranbaxy also settled Quinapril litigation along with this agreement.	Dec-11	33	- Ranbaxy settled the patent litigations involving Lipitor. (Lipitor FY07 sales worth US$12.6bn worldwide). - Ranbaxy will have a licence to sell generic versions of Lipitor (US sales US$7.5bn) and Caduet (US sales US$400m) in the US effective 30 Nov 2011. - The agreement also allows Ranbaxy to sell generic versions of Lipitor 2–4 months in advance to patent expiry in Canada, Belgium, Netherlands, Germany, Sweden, Italy and Australia. Total mkt. size US$2.5bn
Caduet	400		Dec-11	4	
Actos Pioglitazone (Takeda)	2,800	Lost the litigation on basic patent was not sued on the process patent. It has a shared exclusivity with other players	Q2-2011	8	The appeals court held the basic product patent valid expiring in Jan 2011. Other patents extend until 2016. Launch on basic patent expiry in 2011.
Diovan Valsartan (Novartis)	1,500	Not sued Ranbaxy is the only player with FTF status	Sep-12	6	Novartis had sued RBXY claiming infringement on '578 patent (exp 2012), but not on '197 patent (exp 2017) for tabs 40, 80, 160, 320mg. Case dismissed following Rbxy's conversion of its Para 4 to Para 3. Exclusivity anticipated in 2012.
Nexium Esomeprazole(AZN)	3,600	Ranbaxy settled with Astellas / BI Ranbaxy is the only player with FTF status	May-14	37	- Ranbaxy to launch the generic version of Nexium under a licence from AstraZeneca on 27 May 2014. Ranbaxy will be the only company to market this product with 180 days exclusivity in the US market. - Ranbaxy will formulate a significant portion of AstraZeneca's US supply of Nexium from May 2010, including provisions for the manufacture of Esomeprazole magnesium, the active pharmaceutical ingredient (API) from May 2009. - Ranbaxy has been designated as the US distributor for the authorized generic versions of Felodipine Capsules and Omeprazole 40mg tablets.
Aricept Donepezil (Eisai)	1,635	If Teva losses '841 composition of matter patent expiring Nov-2010, Ranbaxy will be the sole FTF on rest of the formulation Patent	Dec-10	6	- Risk adjusted at 50% probability of launch - Ranbaxy has FTF on all formulation patent post the expiry of '841 composition of matter patent. - If Teva losses the '841 case Ranbaxy will have an FTF starting end of 2010.
Total				**123**	

Source: Macquarie Research, July 2008

Appendix 4

Revenue split table

Fig 72 Ranbaxy revenue split

Region US$m	FY05A	FY06A	FY07A	FY10E	3yr CAGR FY07A–10E	Comments
US	**333**	**392**	**390**	**496**	**8%**	- Marketed portfolio now includes 54 molecules. - 98 ANDA pending approval with brand size of US$54bn. Of this 18 FTF with brand value of US$27m.
CANADA	**0**	**12**	**29**	**57**	**25%**	- Ranked 9th in the generics market, in terms of sales growing faster than the market. - Currently key products Cefprozil, Pravastatin, and Lisinopril. Product portfolio now comprises 14 products. - Approval for 6 ANDAs from Health Canada in 2007.
INDIA	**238**	**275**	**338**	**527**	**16.0%**	- Greater than 5% domestic mkt share ranked consistently among top 3. Contribution of chronic therapy to total sales is 24%. Strong in anti-infectives, Urology, CVS. Building a strong presence in respiratory. 18 brands in Top 300 of industry, 9 in Top 100. - Consumer healthcare contributed US$37m in sales. Flagship brand Revital.
Asia Pacific	**53**	**71**	**88**	**129**	**14%**	- China (FY07: US$17m, grw 33%), leading brands Cifran (Ciprofloxacin), Keflor (Cefaclor) and Simcor (Simvastatin) .Pdts mfg. by Ranbaxy Guangzhou China Limited. - Malaysia (FY07: US$24m, grw 12%), primarily driven by government supplies for Oseltamivir capsules (Fluhalt), eight new product launches and four first to launch products. - Thailand, (FY07: US$14m, grw 48%)
China	15	13	17	29	19%	
Thailand	8	9.5	14	22	16%	
Malaysia	14	21	24	32	10%	
Total ME sales	**16**	**18**	**23**	**37**	**17.0%**	- FY07: sales US$23m. 19 products launched. - Top generic company in the UAE.
LATAM	**42**	**49**	**65**	**114**	**20%**	- Brazil and Mexico together constitute almost 80% of sales in the region. - Brazil mkt size US$10.3bn growing at 15 % CAGR
Brazil	22	27	39	71	22%	
Europe (EU)	**216**	**268**	**365**	**487**	**10.1%**	
UK	44	35	47	61	9%	- West Europe (UK, Germany & France) accounts for 47% of the total EU sales. - Germany: won 11 products in the AOK (Germany's largest general local health insurance) tender in 2007. - No. 1 generic company in Romania with market share of 11.2%. Largest sales force in Romania. - Portugal, Italy and Spain jointly contribute US$22m in FY07.
Germany	31	29	49	63	9%	
France	74	70	73	88	6.3%	
Romania	13	72	121	170	12.0%	
CIS	**55**	**74**	**90**	**153**	**19.4%**	- Russia and Ukraine belt (FY07: US$90m, grw of 22%). - 11th position in the Russian generic market (Size: US$5.4bn, grw 19%) - Ukraine belt grew by 28% at US$38m for FY07.
Ukraine Belt	22	30	38	63	19%	
Russia	33	44	52	90	20%	
Africa	**68**	**89**	**126**	**206**	**17.7%**	- South Africa FY07 US$53m. Be-Tabs strengthens Ranbaxy's basket of products, especially in the acute and OTC product streams
South Africa	24	24	53	92	20%	
Total DF sales	**1021**	**1247**	**1514**	**2204**	**13.9%**	
API sales	126	100	105	122	5%	
Total gross sales	**1147**	**1347**	**1619**	**2326**	**13.3%**	

Source: Macquarie Research, July 2008

Appendix 5

Financials

Fig 73 Macquarie estimated P&L

P&L	FY04A	FY05A	FY06A	FY07A	FY08E	FY09E	FY10E
Net Sales	52,451	51,019	60,171	66,480	76,046	86,540	96,889
Other Operating Income	2,061	1,796	1,145	3,343	1,250	1,280	1,600
Total Revenues	54,512	52,816	61,316	69,822	77,296	87,820	98,489
Growth %	13.0%	-3.1%	16.1%	13.9%	10.7%	13.6%	12.1%
Cost of Material / Goods	(22,254)	(24,762)	(26,832)	(30,570)	(34,221)	(38,510)	(42,631)
% of Revenue	40.8%	46.9%	43.8%	43.8%	44.3%	43.9%	43.3%
Personnel Cost	(6,382)	(6,786)	(7,955)	(8,918)	(9,886)	(10,817)	(12,111)
% of Revenue	11.7%	12.8%	13.0%	12.8%	12.8%	12.3%	12.3%
Selling, General and Administration	(12,496)	(13,232)	(13,867)	(16,907)	(18,251)	(20,337)	(22,285)
% of Revenue	22.9%	25.1%	22.6%	24.2%	23.6%	23.2%	22.6%
R&D Expense	(3,376)	(4,925)	(3,955)	(4,280)	(4,715)	(5,365)	(5,910)
% of Revenue	6.2%	9.3%	6.4%	6.1%	6.1%	6.1%	6.0%
Recurring EBITDA	10,005	3,111	8,707	9,147	10,223	12,790	15,552
Margin %	18.4%	5.9%	14.2%	13.1%	13.2%	14.6%	15.8%
Recurring EBIT	8,790	1,667	6,864	6,964	8,022	10,559	13,090
EBIT Margin %	16.1%	3.2%	11.2%	10.0%	10.4%	12.0%	13.3%
Recurring PBT	9,262	1,604	6,307	6,230	7,922	11,739	14,790
Recurring PBT Margin%	17.0%	3.0%	10.3%	8.9%	10.2%	13.4%	15.0%
PAT (Pre Exc)	7,298	1,604	5,134	4,909	6,338	9,391	11,906
Net Income (pre Exc)	7,272	1,577	5,084	4,788	6,219	9,271	11,771
Margin %	13.3%	3.0%	8.3%	6.9%	8.0%	10.6%	12.0%
Core Recurr EPS	19.5	4.2	12.7	11.9	13.5	20.1	25.5
Reported Revenue	54,512	52,816	61,316	69,822	78,136	96,863	121,342
EBIT - Reported Implied	8,790	1,667	6,864	6,964	8,532	17,483	30,437
Margin%	16.1%	3.2%	11.2%	10.0%	11.0%	19.9%	30.9%
Reported Net Income	6,997	2,555	5,251	7,746	6,626	14,810	25,735
Reported Net Margin%	12.8%	4.8%	8.6%	11.1%	8.6%	16.9%	26.1%
Fully Diluted EPS-reported	18.7	6.8	13.1	19.3	14.3	32.0	55.7

Source: Macquarie Research, July 2008

Appendix 6

FDA GMP violation risk

Disgorgement of profits, established in a 1999 court ruling in the FDA's case against Abbott, is the agency's latest GMP enforcement weapon. Disgorgement is a sanction based on the premise that an individual or corporation is not entitled to profits gained by illegal means.

Disgorgement is not a punitive measure, but is meant as a deterrent by taking away profits to which a company, in the FDA's opinion, is not entitled. Unlike restitution, which is paid to a victim, disgorged funds are paid to the government.

The US$100m penalty levied against Abbott was intended "to be large enough to attract industry's attention to an issue FDA was trying to address, and to serve as a meaningful deterrent," according to Blumberg, FDA's deputy chief counsel for litigation.

Disgorgement is not meant to take away all profits generated by products in violation of the Food, Drug and Cosmetic (FD&C) Act – which, in the case of Schering- Plough (a US$500m penalty), could have amounted to billions of dollars– but should be sufficiently severe to dissuade repeat behavior.

The sums obtained in these decrees are not meant to be a complete disgorgement of all profits, only of those products in violation. And even with respect to those products, FDA has not sought – to date – 100% disgorgement.

As a consequence of GMP violations Abbott was asked to pay a one-time payment of US$100m to the US Treasury and asked to validate its manufacturing and quality processes.

Source: Food and drug letter, June 2002

Ranbaxy Laboratories Ltd (RBXY IN, Outperform, Target price: Rs470.00)

Quarterly Results		1Q/08A	2Q/08E	3Q/08E	4Q/08E
Revenue	**m**	**19,324**	**19,324**	**19,324**	**19,324**
Gross Profit	**m**	**10,769**	**10,769**	**10,769**	**10,769**
Cost of Goods Sold	m	8,555	8,555	8,555	8,555
EBITDA	**m**	**2,556**	**2,556**	**2,556**	**2,556**
Depreciation	m	550	550	550	550
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	**m**	**2,006**	**2,006**	**2,006**	**2,006**
Net Interest Income	m	-150	-150	-150	-150
Associates	m	1	1	1	1
Exceptionals	m	127	127	127	127
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	125	125	125	125
Pre-Tax Profit	**m**	**2,109**	**2,109**	**2,109**	**2,109**
Tax Expense	m	-422	-422	-422	-422
Net Profit	**m**	**1,688**	**1,688**	**1,688**	**1,688**
Minority Interests	m	-31	-31	-31	-31
Reported Earnings	**m**	**1,657**	**1,657**	**1,657**	**1,657**
Adjusted Earnings	**m**	**1,555**	**1,555**	**1,555**	**1,555**
EPS (rep)		3.58	3.58	3.58	3.58
EPS (adj)		3.36	3.36	3.36	3.36
EPS Growth yoy (adj)	%	12.6	12.6	12.6	12.6
EBITDA Margin	%	13.2	13.2	13.2	13.2
EBIT Margin	%	10.4	10.4	10.4	10.4
Earnings Split	%	25.0	25.0	25.0	25.0
Revenue Growth	%	10.7	10.7	10.7	10.7
EBIT Growth	%	15.2	15.2	15.2	15.2

Profit & Loss		2007A	2008E	2009E	2010E
Revenue	**m**	**69,822**	**77,296**	**87,820**	**98,489**
Gross Profit	**m**	**39,252**	**43,075**	**49,310**	**55,858**
Cost of Goods Sold	m	30,570	34,221	38,510	42,631
EBITDA	**m**	**9,147**	**10,223**	**12,790**	**15,552**
Depreciation	m	2,183	2,201	2,231	2,462
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	**m**	**6,964**	**8,022**	**10,559**	**13,090**
Net Interest Income	m	-1,192	-600	680	1,200
Associates	m	2	5	10	15
Exceptionals	m	3,755	509	6,924	17,347
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	459	500	500	500
Pre-Tax Profit	**m**	**9,987**	**8,437**	**18,673**	**32,152**
Tax Expense	m	-2,118	-1,686	-3,733	-6,267
Net Profit	**m**	**7,870**	**6,750**	**14,940**	**25,885**
Minority Interests	m	-124	-124	-130	-150
Reported Earnings	**m**	**7,746**	**6,626**	**14,810**	**25,735**
Adjusted Earnings	**m**	**4,788**	**6,219**	**9,271**	**11,771**
EPS (rep)		19.33	14.34	32.04	55.68
EPS (adj)		11.95	13.46	20.06	25.47
EPS Growth (adj)	%	-5.8	12.6	49.1	27.0
PE (rep)	x	24.0	32.3	14.4	8.3
PE (adj)	x	38.7	34.4	23.1	18.2
Total DPS		9.95	10.00	10.03	10.19
Total Div Yield	%	2.1	2.2	2.2	2.2
Weighted Average Shares	m	401	462	462	462
Period End Shares	m	401	462	462	462

Profit and Loss Ratios		2007A	2008E	2009E	2010E
Revenue Growth	%	13.9	10.7	13.6	12.1
EBITDA Growth	%	5.1	11.8	25.1	21.6
EBIT Growth	%	1.5	15.2	31.6	24.0
Gross Profit Margin	%	56.2	55.7	56.1	56.7
EBITDA Margin	%	13.1	13.2	14.6	15.8
EBIT Margin	%	10.0	10.4	12.0	13.3
Net Profit Margin	%	11.3	8.7	17.0	26.3
Payout Ratio	%	83.3	74.3	50.0	40.0
EV/EBITDA	x	21.6	23.4	18.7	15.3
EV/EBIT	x	28.4	29.8	22.6	18.2
Balance Sheet Ratios					
ROE	%	17.8	11.4	10.7	11.5
ROA	%	8.0	8.2	9.7	10.3
ROIC	%	8.7	9.8	12.0	13.9
Net Debt/Equity	%	129.5	-14.0	-18.1	-27.0
Interest Cover	x	5.8	13.4	nmf	nmf
Price/Book	x	6.6	2.6	2.3	1.9
Book Value per Share		70.0	176.1	198.2	243.6

Cashflow Analysis		2007A	2008E	2009E	2010E
EBITDA	**m**	**9,147**	**10,733**	**19,714**	**32,899**
Tax Paid	m	-1,411	-1,686	-3,733	-6,267
Chgs in Working Cap	m	802	-1,038	-1,611	-3,201
Net Interest Paid	m	-1,200	-600	680	1,200
Other	m	1,695	0	0	0
Operating Cashflow	**m**	**9,033**	**7,408**	**15,050**	**24,632**
Acquisitions	m	-4,260	-1,500	0	0
Capex	m	-4,361	-4,638	-5,708	-6,402
Asset Sales	m	0	0	0	0
Other	m	0	500	500	500
Investing Cashflow	**m**	**-8,621**	**-5,638**	**-5,208**	**-5,902**
Dividend (Ordinary)	m	-3,405	-4,622	-4,636	-4,708
Equity Raised	m	92	51,372	0	0
Debt Movements	m	4,333	-17,345	0	0
Other	m	0	0	0	0
Financing Cashflow	**m**	**1,020**	**29,405**	**-4,636**	**-4,708**
Net Chg in Cash/Debt	**m**	**1,433**	**31,176**	**5,206**	**14,022**

Balance Sheet		2007A	2008E	2009E	2010E
Cash	m	4,383	11,488	16,694	30,716
Receivables	m	14,931	15,581	16,591	18,598
Inventories	m	16,409	17,124	18,234	20,439
Investments	m	0	1,500	1,500	1,500
Fixed Assets	m	23,483	25,920	29,397	33,337
Intangibles	m	22,136	22,136	22,136	22,136
Other Assets	m	9,778	10,044	10,458	11,277
Total Assets	**m**	**91,119**	**103,792**	**115,011**	**138,002**
Payables	m	8,556	8,929	9,508	10,658
Short Term Debt	m	10,763	0	0	0
Long Term Debt	m	30,653	0	0	0
Provisions	m	2,976	2,976	2,976	2,976
Other Liabilities	m	9,567	9,782	10,117	10,782
Total Liabilities	**m**	**62,515**	**21,688**	**22,601**	**24,415**
Shareholders' Funds	m	28,034	81,410	91,585	112,612
Minority Interests	m	571	695	825	975
Other	m	0	0	0	0
Total S/H Equity	**m**	**28,604**	**82,105**	**92,410**	**113,586**
Total Liab & S/H Funds	**m**	**91,119**	**103,792**	**115,011**	**138,002**

All figures in INR unless noted.
Source: Macquarie Research, July 2008

Important disclosures:

Recommendation definitions

Macquarie - Australia/New Zealand
Outperform – return >5% in excess of benchmark return (>2.5% in excess for listed property trusts)
Neutral – return within 5% of benchmark return (within 2.5% for listed property trusts)
Underperform – return >5% below benchmark return (>2.5% below for listed property trusts)
Macquarie - Asia
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%
Macquarie First South - South Africa
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%
Macquarie - Canada
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return
Macquarie - USA
Outperform (Buy) – return >5% in excess of benchmark return
Neutral (Hold) – return within 5% of benchmark return
Underperform (Sell)– return >5% below benchmark return
Recommendations – 12 months
Note: Quant recommendations may differ from Fundamental Analyst recommendations

Volatility index definition*

This is calculated from the volatility of historic price movements.

Very high–highest risk – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.

High – stock should be expected to move up or down at least 40–60% in a year – investors should be aware this stock could be speculative.

Medium – stock should be expected to move up or down at least 30–40% in a year.

Low–medium – stock should be expected to move up or down at least 25–30% in a year.

Low – stock should be expected to move up or down at least 15–25% in a year.
* Applicable to Australian/NZ stocks only

Financial definitions

All "Adjusted" data items have had the following adjustments made:
Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives & hedging, IFRS impairments & IFRS interest expense
Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends & minority interests

EPS = adjusted net profit / efpowa*
ROA = adjusted ebit / average total assets
ROA Banks/Insurance = adjusted net profit /average total assets
ROE = adjusted net profit / average shareholders funds
Gross cashflow = adjusted net profit + depreciation
*equivalent fully paid ordinary weighted average number of shares

All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).

Recommendation proportions – For quarter ending 30 June 2008

	AU/NZ	Asia	RSA	USA	CA
Outperform	41.88%	66.96%	66.13%	50.82%	71.01%
Neutral	42.96%	16.30%	22.58%	44.26%	24.64%
Underperform	15.16%	16.74%	11.29%	4.92%	4.35%

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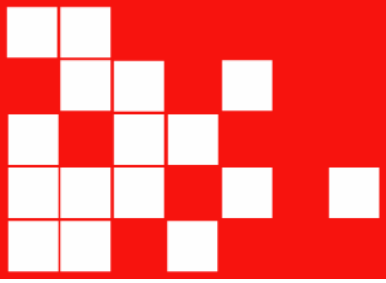

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Futures - Tim Smith	(852) 2823 4637
Hedge Fund Sales - Darin Lester	(852) 2823 4736
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