

Company

10 June 2010 | 12 pages

Ranbaxy (RANB.BO)

 Equity

On the Mend

- Focus on Putting Things Right** — We met the Ranbaxy management recently. While the focus remains on resolving the FDA/DOJ issues, Ranbaxy is also revisiting its strategy on various markets in a bid to improve profitability. We expect this to reflect fully in financials (normalized EBIDTA margins of 16-20%) once the FDA issues are resolved. While it is difficult to predict a timeline, we maintain that the worst is behind us. Maintain Buy.
- FDA Issues** — Ranbaxy appears confident of some progress in CY10, though it is tough to predict any timeline for resolution. It recently brought in a senior person from Daiichi (Mr. Dale Adkisson) as global quality head. Besides addressing the issues related to Paonta, Dewas & Gloversville (details inside), it is also working on strengthening the internal reporting network between its various sites.
- Revisiting Strategy in Key Markets** — Besides regaining lost ground in India & US (resolve FDA issues, secure FTFs, focus on profitable products), Ranbaxy has identified South Africa, Romania & CIS (potential US\$100m+ markets) as key growth markets over the medium term. At the same time, it intends to pull down its presence in EU & LatAm, besides focusing on Japan & GCC in the longer term.
- Key Longer-Term Growth Drivers** — Ranbaxy has identified biosimilars (thru Zenotech), vaccines (thru Biovel) & Japanese generics (thru DS Espha) as key longer-term growth drivers. It is also optimistic on creating some value through its drug discovery efforts (anti-malarial NCE in Ph-3) & synergies with Daiichi.
- Other Takeaways** — 1) Nexium API supplies to Astra to start by end CY10 from Toansa & formulations in CY11; 2) In discussion with Daiichi for an ideal biz model for China; 3) Expects to launch an improved version of isotretinoin in the US, in the next 2 years, under its deal with Cipher; 4) Aligning drug discovery efforts with Daiichi.

Buy/Medium Risk	1M
Price (10 Jun 10)	Rs424.35
Target price	Rs620.00
Expected share price return	46.1%
Expected dividend yield	0.0%
Expected total return	46.1%
Market Cap	Rs178,511M US\$3,797M

Price Performance (RIC: RANB.BO, BB: RBXY IN)



Statistical Abstract

Year to	Net Profit	Diluted EPS	EPS growth	P/E	P/B	ROE	Yield
31 Dec	(RsM)	(Rs)	(%)	(x)	(x)	(%)	(%)
2007A	4,745	11.86	11.7	35.8	6.1	17.6	2.0
2008A	5,878	13.98	17.9	30.3	4.2	16.6	0.0
2009E	910	2.17	-84.5	196.0	3.6	2.0	0.0
2010E	4,025	9.58	342.3	44.3	2.7	6.9	2.0
2011E	9,772	23.25	142.8	18.3	1.6	11.2	2.0

Source: Powered by dataCentral

Prashant Nair, CFA

 +91-22-6631-9855
 prashant.nair@citi.com

Akshay Rai

akshay.rai@citi.com

See Appendix A-1 for Analyst Certification, Important Disclosures and non-US research analyst disclosures.

Citi Investment Research & Analysis is a division of Citigroup Global Markets Inc. (the "Firm"), which does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision.

Fiscal year end 31-Dec	2007	2008	2009E	2010E	2011E
Valuation Ratios					
P/E adjusted (x)	35.8	30.3	196.0	44.3	18.3
EV/EBITDA adjusted (x)	21.3	24.3	40.1	22.3	12.2
P/BV (x)	6.1	4.2	3.6	2.7	1.6
Dividend yield (%)	2.0	0.0	0.0	2.0	2.0
Per Share Data (Rs)					
EPS adjusted	11.86	13.98	2.17	9.58	23.25
EPS reported	19.35	-22.44	19.57	48.94	107.42
BVPS	70.05	102.20	119.18	157.96	257.35
DPS	8.50	0.00	0.00	8.50	8.50
Profit & Loss (RsM)					
Net sales	69,822	70,852	80,017	103,968	144,112
Operating expenses	-62,859	-68,303	-71,309	-80,714	-90,028
EBIT	6,964	2,549	8,708	23,254	54,084
Net interest expense	-1,412	-2,055	-693	-786	-418
Non-operating/exceptionals	4,434	-15,494	3,165	3,080	2,490
Pre-tax profit	9,985	-15,000	11,179	25,547	56,156
Tax	-2,118	5,651	-2,870	-4,970	-10,996
Extraord./Min.Int./Pref.div.	-124	-84	-84	-4	-4
Reported net income	7,744	-9,434	8,225	20,573	45,156
Adjusted earnings	4,745	5,878	910	4,025	9,772
Adjusted EBITDA	10,086	8,363	4,800	8,263	12,740
Growth Rates (%)					
Sales	13.9	1.5	12.9	29.9	38.6
EBIT adjusted	1.5	-15.1	-63.2	151.3	81.2
EBITDA adjusted	15.8	-17.1	-42.6	72.2	54.2
EPS adjusted	11.7	17.9	-84.5	342.3	142.8
Cash Flow (RsM)					
Operating cash flow	11,992	-8,318	13,077	29,082	53,600
Depreciation/amortization	2,183	2,452	2,627	2,804	2,849
Net working capital	573	-2,387	1,447	4,914	5,174
Investing cash flow	-4,364	-5,555	-14,241	-17,375	-31,475
Capital expenditure	-5,227	-5,749	-4,850	-3,600	-3,563
Acquisitions/disposals	639	-745	-9,569	-13,000	-27,000
Financing cash flow	-392	26,885	-6,698	-4,360	-18,741
Borrowings	4,333	-4,698	-6,005	0	-14,750
Dividends paid	-3,642	-2,620	0	-3,573	-3,573
Change in cash	7,236	13,012	-7,862	7,347	3,384
Balance Sheet (RsM)					
Total assets	92,782	121,961	120,097	140,733	172,721
Cash & cash equivalent	4,379	23,956	9,656	12,021	12,180
Accounts receivable	14,931	13,310	16,048	17,694	19,633
Net fixed assets	45,619	49,607	51,830	52,626	53,339
Total liabilities	64,178	78,323	69,237	73,569	63,770
Accounts payable	8,615	8,303	8,383	9,243	10,255
Total Debt	41,416	43,114	37,109	37,109	22,359
Shareholders' funds	28,604	43,637	50,860	67,164	108,951
Profitability/Solvency Ratios (%)					
EBITDA margin adjusted	14.4	11.8	6.0	7.9	8.8
ROE adjusted	17.6	16.6	2.0	6.9	11.2
ROIC adjusted	7.6	16.9	-1.0	0.7	-1.6
Net debt to equity	129.5	43.9	54.0	37.4	9.3
Total debt to capital	59.1	49.7	42.2	35.6	17.0

For further data queries on Citi's full coverage universe
please contact CIR Data Services Asia Pacific at
CIRDataServicesAsiaPacific@citi.com or +852-2501-2791



On The Mend

We met the Ranbaxy management recently. While the focus remains on resolving the FDA/DOJ issues, Ranbaxy is also revisiting its strategy on various markets in a bid to improve profitability. We expect this to reflect fully in financials (normalized EBITDA margins of 16-20%) once the FDA issues are resolved. While it is difficult to predict a timeline, we maintain that the worst is behind us. Maintain Buy.

Key Takeaways from the Visit

FDA Issues – Work In Progress

Ranbaxy continues to work on addressing the issues raised by the FDA / DOJ on its manufacturing facilities. It remains difficult to predict any timeline for resolution, although the management appeared confident that there would be some progress this year.

The company recently brought in Mr. Dale Adkisson (formerly Senior Director, Quality Assurance with Daiichi Sankyo, USA) as its global quality head. Besides working on the immediate issues related to Paonta Sahib, Dewas & Gloversville, the company is also implementing steps to strengthen the internal reporting network and improve information sharing between its various manufacturing sites. This is to make sure that the entire manufacturing chain can take note of relevant regulatory feedback at any facility.

In terms of the individual manufacturing facilities that have fallen foul of the FDA, the current status is as follows:

- **Dewas:** Ranbaxy believes it has fully implemented the corrective measures at Dewas. It has also sent a detailed report, addressing the cross contamination issues raised by the FDA, to the agency. Ranbaxy awaits an inspection and is confident that the plant should be found compliant this time around. However, there is no clarity on the inspection timeline.
- **Gloversville:** Ranbaxy has temporarily suspended manufacturing at the facility after it received a warning letter by the FDA. It has taken steps to address the issues and now awaits a reinspection.
- **Paonta Sahib:** There is some progress in the effort to get this facility functional for the US market again. The independent auditor, appointed in consultation with the FDA, has concluded its review of the facility. Its report will be submitted to the FDA shortly. After discussion with the FDA, the same auditor will conduct validity assessments of the ANDAs filed from the facility. The next step would be to implement the corrective action plan, recommended by the auditors and the FDA. Clearly, it remains a complex issue and timelines are uncertain.
- **Other Plants Appear Clear:** Its facilities at Ohm Labs (New Jersey), Toansa (end 2009) and Clinical units (2009 & 2010) have been inspected and cleared by the agency without any major observations.

Figure 1. Ranbaxy – Manufacturing & R&D Sites

Formulations

Dewas, India
Paonta Sahib, India
Mohali, India
Goa, India
New Jersey, USA
Cluj & Bucharest, Romania
South Africa
Kuala Lumpur, Malaysia
Cashel, Ireland
Lagos, Nigeria

APIs

Toansa, India
Mohali, India
Dewas, India
Malanpur, India
Paonta Sahib, India (Fermentation Facility)

Pilot Plants

Formulations

Dewas, India
Mohali, India
Paonta Sahib, India

API

Toansa, India (Synthetic)
Paonta Sahib, India (Fermentation)

Source: Company Reports

Figure 2. Ranbaxy - Key Therapy Areas/Products

Top 5 Therapy Areas

Anti Infective
Cardiovascular
GI Tract
Rheumatology
CNS

Top 5 Molecules

Valaciclovir
Simvastatin
Amoxi/clav
Ciprofloxacin
Amoxicillin

Source: Company Reports

Recalibrating its Market Focus

Besides regaining lost ground in India and the USA, Ranbaxy has identified South Africa, Romania and CIS (Russia & Ukraine) as key growth markets over the medium term. It also intends to pull down on its presence in Europe and Latin America, besides focusing on Japan and the Middle East over the longer term.

India & USA remain key markets

- **India:** Ranbaxy has launched Project Viraat, in an attempt to regain market leadership (although the No 1 spot looks out of reach post the Abbott – Piramal deal). It has added c1,500 people to its field force, increased SBU count (from 16 to 26) and implemented several initiatives to tap rural markets. It expects India revenues to grow at a c15% CAGR over the next 3-5 years. During this period, Ranbaxy aims to consolidate its position in key therapeutic areas (aims to retain leadership in anti infectives, to be in the top 3 in CVS & in the top 5 in CNS). It is also setting up a new channel to cater to the hospitals segment.
- **USA:** Ranbaxy's long history in the market & its pipeline (including FTFs on several key products) have kept it relevant in this market, despite the setbacks it has faced recently. After the initial sharp decline (post the import alert on Dewas & Paonta Sahib), core sales (excluding exclusivities / settlements) has settled down in the US\$150-200m annualized range.

The New Jersey facilities of Ohm Labs have emerged as the primary sites for this market. Ranbaxy is investing in capacity expansion as well as developing lines beyond oral solids at these sites. Profitability, however, remains subdued on account of the unabsorbed overheads at Paonta & Dewas, high legal and consultancy costs in resolving the FDA/DOJ issues & the relatively higher cost of manufacturing in the USA.

While the company's key focus, besides getting the FDA issues resolved, is on safeguarding the upside from its FTF/settlement pipeline, it is also using this phase as an opportunity to restructure its product basket by focusing on the more profitable products rather than being present in every product. It has also entered into a tie-up with Cipher Pharmaceuticals to work on an improved version of isotretinoin (CIP-Isotretinoin), which is one of the key products it had to stop selling in the US following the import alert. It expects to be ready to launch in the next two years.

Ranbaxy is also confident that it will be able to capture value from each of its unique opportunities either by way of launch or some other route. It has a good track record on this front – launched generic versions of Imitrex (albeit delayed) & Valtrex (c68% market share during exclusivity) through site transfers & monetized Flomax (US\$50m) through a settlement despite not getting an approval to launch.

Nexium Supplies to Astra: Ranbaxy expects to commence API supplies by end of CY10 from Toansa. It has already supplied validation batches to Astra, which are under evaluation. Supply of formulations is slated to start next year.

Romania, CIS & South Africa – Potential US\$100m+ markets

Ranbaxy expects Romania, CIS (Russia & Ukraine) and Africa to be the main markets, besides US and India, to drive growth over the medium term. Besides targeting US\$100m+ revenues from each of these markets (not a big ask, given that they are already reasonably big in these markets), Ranbaxy also plans to look at local manufacturing options to consolidate its position in these markets.

- **Romania:** Ranbaxy is the largest generic player in Romania, with revenues of US\$80m in CY09. The market has been in a state of flux after EU accession and also got hit by the recession in CY09. Ranbaxy expects a recovery in CY10 (it has already taken some price hikes in 1Q), although some liquidity issues still persist. The company is also considering using Romania as a hub for its EU operations, as it already has a manufacturing set up and clinical unit in the country.
- **CIS (Russia & Ukraine):** Ranbaxy had revenues of cUS\$85m from Russia & Ukraine, put together, in CY09 – it is quite strong in Ukraine but not as much, relative to competition, in Russia. It is now evaluating the best step forward in this market, given the changing regulatory environment. The company is considering various options in Russia – getting a local partner, own manufacturing or acquiring a local facility. Its current facility is quite old and it appears to be leading towards setting up/ acquiring a facility, as the new pharma policy might require drugs to be manufactured locally.
- **Africa:** Ranbaxy believes that the African market could be a key growth driver over the medium term. It is the second largest company in this market (behind GSK), with a presence in 43 out of 46 countries, and aims to further consolidate its position going forward. We believe Ranbaxy's strengths in anti-infectives and ARV drugs should aid its efforts to grow in this region. The company had revenues of US\$125m in CY09 and expects this to touch the cUS\$250m mark over the next three years.

South Africa is the key market in this region, where Ranbaxy has already established a strong presence through the acquisition of Betabs in late 2006. It is setting up a new manufacturing facility in the country and expects to cross the US\$100m revenues mark over the next two to three years (from cUS\$55-60m in CY09).

- **Other Markets:** Ranbaxy is evaluating its business model for the Middle East region. While it is the largest player in Dubai, its presence is limited in the rest of the region. It is now looking at options in Saudi Arabia and whether it needs some local manufacturing base to make progress in this market. It is also in discussion with Daiichi Sankyo to figure out an ideal business model to target the Chinese market.

Limiting its presence in some other markets

Ranbaxy intends to restrict its operations in Latin America and Europe in order to avoid spreading itself too thin and to focus more on the specific markets that, it believes, hold good potential. To this end, it has started outsourcing extensively, closed down some plants and sold off some businesses.

- **Latin America:** Ranbaxy has limited presence in this region (revenues of US\$71m in CY09) and intends to focus on a few key markets – viz. Venezuela, Brazil & Mexico – going forward.

- **Europe:** Ranbaxy has already started scaling down its operations in Europe in order to improve profitability. Several countries in Europe are going through significant regulatory changes – especially on pricing – making it a difficult market to operate in. Ranbaxy plans to use its facilities in Romania and Ireland as manufacturing hubs to cater to this region.

Key Longer-Term Growth Drivers

Ranbaxy has identified biologics / biosimilars (through Zenotech), vaccines (through its recent acquisition of Biovel) & Japanese generics (DS Espha set up by Daiichi) as key growth drivers over the long term. It is also optimistic on creating some value through its drug discovery research efforts and synergies with Daiichi Sankyo.

- **Japan generics:** Ranbaxy's play in Japan will be through the recently established Daiichi Sankyo Espha. As agreed with Daiichi Sankyo, Ranbaxy will develop, and manufacture the products, which will then be marketed by DS Espha. We expect this to be a significant opportunity over the long term, as Japan is the second largest pharma market in the world and the government is now taking steps to materially increase generic penetration.
- **Biosimilars:** Ranbaxy expects to target the biosimilars space through Zenotech, in which it has 47% stake. This is, however, also contingent on resolution of the ongoing litigation between Daiichi Sankyo and Zenotech shareholders over terms of the open offer. There could be some progress on this front in this fiscal, following which business initiatives can be taken up in earnest.
- **Vaccines:** Ranbaxy's efforts in vaccines would be through the recently acquired Biovel Life Sciences. Biovel has received regulatory approvals for Typhoid Vi antigen and Hib conjugate vaccines, in India. The first launch in India is likely in CY11, but there are no current plans to launch in developed markets.
- **New Drug Discovery Research:** Ranbaxy has an anti-malarial NCE, being developed in collaboration with GSK, in phase 3 trials. If all goes well, this could be launched in India and other developing countries in end CY11/CY12. The project has been largely funded by external grants – as such, the risk is lower. While profitability is unlikely to be very high, it could help generate a lot of goodwill for Ranbaxy in some of its key markets. Ranbaxy also has a molecule in Ph I trials for COPD.

Update on key FTFs

Figure 3. Ranbaxy – Status of Key P-IV Filings

Product	Generic Name	Innovator	Sales (US\$ m)	Status	CIRA Comment
Imitrex	Sumatriptan	GSK	nm	Launched in Feb '10	Launched from New Jersey - delayed due to time taken to shift site - lost most of the upside in the process
Valtrex	Valaciclovir	GSK	nm	Launched in Nov '10 – c68% market share during exclusivity	Launched from New Jersey on time despite having to change sites for both API & formulations – positive signal for other FTFs
Flomax	Tamsulosin Hydrochloride	Astellas / Boehringer	nm	No approval yet; Monetized the opportunity by facilitating entry of another generic – received US\$50m	Indicates that P-IV launches are not a given despite the success with Valtrex & Imitrex Ability to monetize the opportunity despite a lack of approval indicates that there are other options available to the company to capitalize on its pipeline
Lipitor - USA	Atorvastatin	Pfizer	7,500	Settled with Pfizer - launch in Nov 2011	Possibly filed from Paonta (given absence of tentative approval till date), hence may require the AIP to be resolved before a launch is possible – there may be other options to monetize
Lipitor (Non US)	Atorvastatin	Pfizer	5,600	Settled with Pfizer - can launch 2-4 months prior to patent expiry across various markets	Ranbaxy has launched the generic versions in Canada and South Africa; Appears to be secure given that there are no regulatory issues in these markets
Caduet	Amlodipine Besylate / Atorvastatin Calcium	Pfizer	400	Settled with Pfizer - launch in Nov 2011	
Nexium	Esomeprazole Magnesium	AstraZeneca	6,300	Settled with Astra - launch in 2014; The settlement also includes a supply agreement for Nexium API & formulations with Astra, until patent expiry	API supplies to begin from end CY10 & formulation launch in CY11 Exclusivity launch only in May 2014 – provides adequate time for resolution of FDA issues
Actos	Pioglitazone Hydrochloride	Takeda	3,400	Settled with Takeda - launch in Aug 2012; Takeda has also settled with other P-IV filers	We believe that Mylan, Watson & Ranbaxy are FTF; Could lead to cRs12/sh upside (assuming 50% price erosion & 25% market share)
Valcyte	Valganciclovir Hydrochloride	Roche	550	A US district court, in Oct '10, has ruled that Ranbaxy's product does not infringe Roche's patent, while upholding the patent itself (expires in 2015); Ranbaxy has a tentative approval but hasn't received a final approval despite the expiry of the 30-month stay & litigation win	Ranbaxy's DMF for the product is filed from Dewas; Final approval may be contingent on the resolution of FDA issues at Dewas/Paonta; This could be longer than a 180 day exclusivity opportunity given that the patent protection extends till 2015 and there are no other known P-IV filers
Aricept	Donepezil Hydrochloride	Eisai	2,100	Teva has final approval; Ranbaxy is one of the 8 generic players with tentative approval; First patent expiry is in Nov 2010	Ranbaxy could get final approval post the Nov 2010 patent expiry along with other generic players – subject to FDA issues

Source: Company Reports and CIRA Estimates

Ranbaxy

Company description

Ranbaxy is a leading Indian pharmaceutical company with a strong export business complementing its domestic business. It has a vision of becoming a leading generics pharmaceutical company in the global market and, in the long term, a research-led pharmaceutical company. The company already has a presence in several countries, and has developed a complex business model, perhaps the first of its kind in a developing country.

Investment strategy

We rate Ranbaxy Buy/Medium Risk with a target price of Rs620. The timely approval & launch of Valtrex (generic valacyclovir) in the US market with exclusivity and trends in the last two quarters indicate that the worst is behind for Ranbaxy. There has been tangible improvement in emerging markets, which were severe pressure at the beginning of the year and signs that Daiichi sees a key role for Ranbaxy in its future strategy. The impact of the US FDA action on its facilities (Dewas & Paonta Sahib) is also well understood and built into estimates and valuations. With the approval for Valtrex coming through on time, we also have more comfort on Ranbaxy's ability to successfully change sites and get approvals in time for its other FTF opportunities, reinforcing our positive stance on the stock.

Valuation

We have a target price of Rs620 for Ranbaxy, comprising Rs435 for the base generics business and Rs185 for the company's patent challenge pipeline. We use EV/Sales to value the core business as we believe Ranbaxy's current profitability is skewed downwards by the unabsorbed overheads at Paonta Sahib & Dewas as well as the high legal & consultancy charges being incurred towards resolving the FDA issues at these plants. We value the core generics business (excluding exclusivity upsides) at 2.4x Mar 11E recurring sales, which is at a 10% discount to the median of the band in which it has traded over the past 8-9 years. We believe this discount is warranted given the uncertainty in its business following issues with the US FDA. We value the company's patent challenge pipeline using a probability-adjusted NPV approach and applying a discount rate of 15%.

Risks

We rate Ranbaxy Medium Risk as opposed to the High Risk rating as suggested by our quant-based rating system, which tracks 260-day historical share price volatility. The recent high volatility in the stock was largely driven by the FDA actions on its facilities at Paonta Sahib & Dewas. We believe that the impact of the FDA action is now well understood and built into estimates and valuations, as such the risk is lower going forward. The key downside risks to our target price include: 1) Slower than expected resolution of the US FDA issues; 2) Setbacks on its already monetized patent challenge pipeline, in form of litigation wins by other generic companies or delay in approvals/launches; 3) Intensifying pricing pressure in the US and European markets.

Appendix A-1

Analyst Certification

The research analyst(s) primarily responsible for the preparation and content of all or any identified portion of this research report hereby certifies that, with respect to each issuer or security or any identified portion of the report with respect to an issuer or security that the research analyst covers in this research report, all of the views expressed in this research report accurately reflect their personal views about those issuer(s) or securities. The research analyst(s) also certify that no part of their compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst in this research report.

IMPORTANT DISCLOSURES

Ranbaxy (RANB.BO)

Ratings and Target Price History

Fundamental Research

Analyst: Prashant Nair, CFA

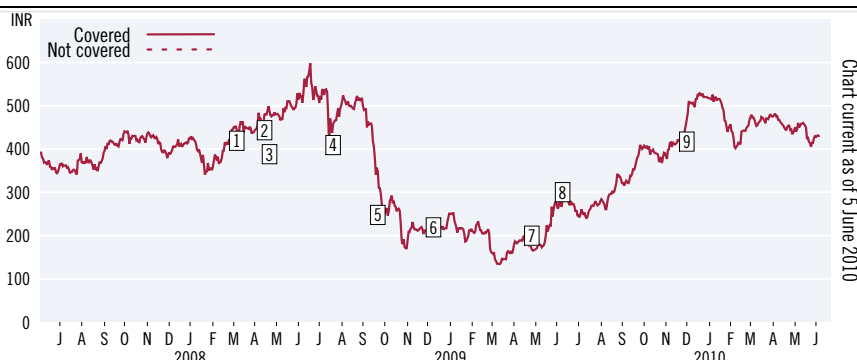


Chart current as of 5 June 2010

	Date	Rating	Target Price	Closing Price
1	6-Mar-08	1M	*545.00	453.60
2	15-Apr-08	1M	*595.00	481.80
3	22-Apr-08	1M	*620.00	487.15

	Date	Rating	Target Price	Closing Price
4	21-Jul-08	*1H	*604.00	458.20
5	21-Sep-08	*3H	*373.00	356.85
6	9-Dec-08	*2H	*241.00	213.05

	Date	Rating	Target Price	Closing Price
7	26-Apr-09	*3H	*141.00	175.75
8	9-Jun-09	3H	*235.00	283.15
9	1-Dec-09	*1M	*620.00	469.10

* Indicates change

Rating/target price changes above reflect Eastern Standard Time

Citigroup Global Markets Inc. or its affiliates beneficially owns 1% or more of any class of common equity securities of Ranbaxy. This position reflects information available as of the prior business day.

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from Ranbaxy in the past 12 months.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, securities-related: Ranbaxy.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following as clients, and the services provided were non-investment-banking, non-securities-related: Ranbaxy.

Rohini Malkani has in the past worked with the India government or its divisions in her personal capacity.

Analysts' compensation is determined based upon activities and services intended to benefit the investor clients of Citigroup Global Markets Inc. and its affiliates ("the Firm"). Like all Firm employees, analysts receive compensation that is impacted by overall firm profitability which includes investment banking revenues.

For important disclosures (including copies of historical disclosures) regarding the companies that are the subject of this Citi Investment Research & Analysis product ("the Product"), please contact Citi Investment Research & Analysis, 388 Greenwich Street, 28th Floor, New York, NY, 10013, Attention: Legal/Compliance. In addition, the same important disclosures, with the exception of the Valuation and Risk assessments and historical disclosures, are contained on the Firm's disclosure website at www.citigroupgeo.com. Valuation and Risk assessments can be found in the text of the most recent research note/report regarding the subject company. Historical disclosures (for up to the past three years) will be provided upon request.

Citi Investment Research & Analysis Ratings Distribution

Data current as of 31 Mar 2010

	Buy	Hold	Sell
Citi Investment Research & Analysis Global Fundamental Coverage	51%	36%	14%
% of companies in each rating category that are investment banking clients	48%	46%	39%

Guide to Citi Investment Research & Analysis (CIRA) Fundamental Research Investment Ratings:

CIRA's stock recommendations include a risk rating and an investment rating.

Risk ratings, which take into account both price volatility and fundamental criteria, are: Low (L), Medium (M), High (H), and Speculative (S).

Investment ratings are a function of CIRA's expectation of total return (forecast price appreciation and dividend yield within the next 12 months) and risk rating.

For securities in emerging markets (Asia Pacific, Emerging Europe/Middle East/Africa, and Latin America), investment ratings are: Buy (1) (expected total return of 15% or more for Low-Risk stocks, 20% or more for Medium-Risk stocks, 30% or more for High-Risk stocks, and 40% or more for Speculative stocks); Hold (2) (5%-15% for Low-Risk stocks, 10%-20% for Medium-Risk stocks, 15%-30% for High-Risk stocks, and 20%-40% for Speculative stocks); and Sell (3) (5% or less for Low-Risk stocks, 10% or less for Medium-Risk stocks, 15% or less for High-Risk stocks, and 20% or less for Speculative stocks).

Investment ratings are determined by the ranges described above at the time of initiation of coverage, a change in investment and/or risk rating, or a change in target price (subject to limited management discretion). At other times, the expected total returns may fall outside of these ranges because of market price movements and/or

other short-term volatility or trading patterns. Such interim deviations from specified ranges will be permitted but will become subject to review by Research Management. Your decision to buy or sell a security should be based upon your personal investment objectives and should be made only after evaluating the stock's expected performance and risk.

Guide to Citi Investment Research & Analysis (CIRA) Corporate Bond Research Credit Opinions and Investment Ratings: CIRA's corporate bond research issuer publications include a fundamental credit opinion of Improving, Stable or Deteriorating and a complementary risk rating of Low (L), Medium (M), High (H) or Speculative (S) regarding the credit risk of the company featured in the report. The fundamental credit opinion reflects the CIRA analyst's opinion of the direction of credit fundamentals of the issuer without respect to securities market vagaries. The fundamental credit opinion is not geared to, but should be viewed in the context of debt ratings issued by major public debt ratings companies such as Moody's Investors Service, Standard and Poor's, and Fitch Ratings. CBR risk ratings are approximately equivalent to the following matrix: Low Risk Triple A to Low Double A; Low to Medium Risk High Single A through High Triple B; Medium to High Risk Mid Triple B through High Double B; High to Speculative Risk Mid Double B and Below. The risk rating element illustrates the analyst's opinion of the relative likelihood of loss of principal when a fixed income security issued by a company is held to maturity, based upon both fundamental and market risk factors. Certain reports published by CIRA will also include investment ratings on specific issues of companies under coverage which have been assigned fundamental credit opinions and risk ratings. Investment ratings are a function of CIRA's expectations for total return, relative return (to publicly available Citigroup bond indices performance), and risk rating. These investment ratings are: Buy/Overweight the bond is expected to outperform the relevant Citigroup bond market sector index (Broad Investment Grade, High Yield Market or Emerging Market), performances of which are updated monthly and can be viewed at <https://fdirect.citigroup.com/> using the "Indexes" tab; Hold/Neutral Weight the bond is expected to perform in line with the relevant Citigroup bond market sector index; or Sell/Underweight the bond is expected to underperform the relevant sector of the Citigroup indexes.

NON-US RESEARCH ANALYST DISCLOSURES

Non-US research analysts who have prepared this report (i.e., all research analysts listed below other than those identified as employed by Citigroup Global Markets Inc.) are not registered/qualified as research analysts with FINRA. Such research analysts may not be associated persons of the member organization and therefore may not be subject to the NYSE Rule 472 and NASD Rule 2711 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. The legal entities employing the authors of this report are listed below:

Citigroup Global Markets India Private Limited

Prashant Nair, CFA, Akshay Rai

OTHER DISCLOSURES

The subject company's share price set out on the front page of this Product is quoted as at 08 June 2010 10:24 AM on the issuer's primary market.

This Product has been modified by the author following a discussion with one or more of the named issuers/issuers of the named securities.

For securities recommended in the Product in which the Firm is not a market maker, the Firm is a liquidity provider in the issuers' financial instruments and may act as principal in connection with such transactions. The Firm is a regular issuer of traded financial instruments linked to securities that may have been recommended in the Product. The Firm regularly trades in the securities of the issuer(s) discussed in the Product. The Firm may engage in securities transactions in a manner inconsistent with the Product and, with respect to securities covered by the Product, will buy or sell from customers on a principal basis.

Securities recommended, offered, or sold by the Firm: (i) are not insured by the Federal Deposit Insurance Corporation; (ii) are not deposits or other obligations of any insured depository institution (including Citibank); and (iii) are subject to investment risks, including the possible loss of the principal amount invested. Although information has been obtained from and is based upon sources that the Firm believes to be reliable, we do not guarantee its accuracy and it may be incomplete and condensed. Note, however, that the Firm has taken all reasonable steps to determine the accuracy and completeness of the disclosures made in the Important Disclosures section of the Product. The Firm's research department has received assistance from the subject company(ies) referred to in this Product including, but not limited to, discussions with management of the subject company(ies). Firm policy prohibits research analysts from sending draft research to subject companies. However, it should be presumed that the author of the Product has had discussions with the subject company to ensure factual accuracy prior to publication. All opinions, projections and estimates constitute the judgment of the author as of the date of the Product and these, plus any other information contained in the Product, are subject to change without notice. Prices and availability of financial instruments also are subject to change without notice. Notwithstanding other departments within the Firm advising the companies discussed in this Product, information obtained in such role is not used in the preparation of the Product. Although Citi Investment Research & Analysis (CIRA) does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of CIRA to provide research coverage of the/those issuer(s) mentioned therein, including in response to news affecting this issuer, subject to applicable quiet periods and capacity constraints. The Product is for informational purposes only and is not intended as an offer or solicitation for the purchase or sale of a security. Any decision to purchase securities mentioned in the Product must take into account existing public information on such security or any registered prospectus.

Investing in non-U.S. securities, including ADRs, may entail certain risks. The securities of non-U.S. issuers may not be registered with, nor be subject to the reporting requirements of the U.S. Securities and Exchange Commission. There may be limited information available on foreign securities. Foreign companies are generally not subject to uniform audit and reporting standards, practices and requirements comparable to those in the U.S. Securities of some foreign companies may be less liquid and their prices more volatile than securities of comparable U.S. companies. In addition, exchange rate movements may have an adverse effect on the value of an investment in a foreign stock and its corresponding dividend payment for U.S. investors. Net dividends to ADR investors are estimated, using withholding tax rates conventions, deemed accurate, but investors are urged to consult their tax advisor for exact dividend computations. Investors who have received the Product from the Firm may be prohibited in certain states or other jurisdictions from purchasing securities mentioned in the Product from the Firm. Please ask your Financial Consultant for additional details. Citigroup Global Markets Inc. takes responsibility for the Product in the United States. Any orders by US investors resulting from the information contained in the Product may be placed only through Citigroup Global Markets Inc.

Important Disclosures for Morgan Stanley Smith Barney LLC Customers: Morgan Stanley & Co. Incorporated (Morgan Stanley) research reports may be available about the companies that are the subject of this Citi Investment Research & Analysis (CIRA) research report. Ask your Financial Advisor or use smithbarney.com to view any available Morgan Stanley research reports in addition to CIRA research reports.

Important disclosure regarding the relationship between the companies that are the subject of this CIRA research report and Morgan Stanley Smith Barney LLC and its affiliates are available at the Morgan Stanley Smith Barney disclosure website at www.morganstanleysmithbarney.com/researchdisclosures.

The required disclosures provided by Morgan Stanley and Citigroup Global Markets, Inc. on Morgan Stanley and CIRA research relate in part to the separate businesses of Citigroup Global Markets, Inc. and Morgan Stanley that now form Morgan Stanley Smith Barney LLC, rather than to Morgan Stanley Smith Barney LLC in its entirety. For Morgan Stanley and Citigroup Global Markets, Inc. specific disclosures, you may refer to www.morganstanley.com/researchdisclosures and https://www.citigroupgeo.com/geopublic/Disclosures/index_a.html.

This CIRA research report has been reviewed and approved on behalf of Morgan Stanley Smith Barney LLC. This review and approval was conducted by the same person who reviewed this research report on behalf of CIRA. This could create a conflict of interest.

The Citigroup legal entity that takes responsibility for the production of the Product is the legal entity which the first named author is employed by. The Product is made available in Australia through Citigroup Global Markets Australia Pty Ltd. (ABN 64 003 114 832 and AFSL No. 240992), participant of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in Australia to Private Banking wholesale clients through Citigroup Pty Limited (ABN 88 004 325 080 and AFSL 238098). Citigroup Pty Limited provides all financial product advice to Australian Private Banking wholesale clients through bankers and relationship managers. If there is any doubt about the suitability of investments held in Citigroup Private Bank accounts, investors should contact the Citigroup Private Bank in Australia. Citigroup companies may compensate affiliates and their representatives for providing products and services to clients. The Product is made available in Brazil by Citigroup Global Markets Brasil - CCTVM SA, which is regulated by CVM - Comissão de Valores Mobiliários, BACEN - Brazilian Central Bank, APIMEC - Associação dos Analistas e Profissionais de Investimento do Mercado de Capitais and ANBID - Associação Nacional dos Bancos de Investimento. Av. Paulista, 1111 - 11º andar - CEP. 01311920 - São Paulo - SP. If the Product is being made available in certain provinces of Canada by Citigroup Global Markets (Canada) Inc. ("CGM Canada"), CGM Canada has approved the Product. Citigroup Place, 123 Front Street West, Suite 1100, Toronto, Ontario M5J 2M3. The Product is made available in France by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 1-5 Rue Paul Cézanne, 8ème, Paris, France. The Product may not be distributed to private clients in Germany. The Product is distributed in Germany by Citigroup Global Markets Deutschland AG & Co. KGaA, which is regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin). Frankfurt am Main, Reuterweg 16, 60323 Frankfurt am Main. If the Product is made available in Hong Kong by, or on behalf of, Citigroup Global Markets Asia Ltd., it is attributable to Citigroup Global Markets Asia Ltd., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Product is made available in Hong Kong by The Citigroup Private Bank to its clients, it is attributable to Citibank N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. The Citigroup Private Bank and Citibank N.A. is regulated by the Hong Kong Monetary Authority. The Product is made available in India by Citigroup Global Markets India Private Limited, which is regulated by Securities and Exchange Board of India. Bakhtawar, Nariman Point, Mumbai 400-021. The Product is made available in Indonesia through PT Citigroup Securities Indonesia. 5/F, Citibank Tower, Bapindo Plaza, Jl. Jend. Sudirman Kav. 54-55, Jakarta 12190. Neither this Product nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable capital market laws and regulations. This Product is not an offer of securities in Indonesia. The securities referred to in this Product have not been registered with the Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market laws and regulations. The Product is made available in Israel through Citibank NA, regulated by the Bank of Israel and the Israeli Securities Authority. Citibank, N.A, Platinum Building, 21 Ha'arba'ah St, Tel Aviv, Israel. The Product is made available in Italy by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. Foro Buonaparte 16, Milan, 20121, Italy. The Product is made available in Japan by Citigroup Global Markets Japan Inc. ("CGMJ"), which is regulated by Financial Services Agency, Securities and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Shin-Marunouchi Building, 1-5-1 Marunouchi, Chiyoda-ku, Tokyo 100-6520 Japan. If the Product was distributed by Nikko Cordial Securities Inc. it is being so distributed under license. In the event that an error is found in an CGMJ research report, a revised version will be posted on the Firm's Global Equities Online (GEO) website. If you have questions regarding GEO, please call (81 3) 6270-3019 for help. The Product is made available in Korea by Citigroup Global Markets Korea Securities Ltd., which is regulated by Financial Services Commission and the Financial Supervisory Service. Hungkuk Life Insurance Building, 226 Shinmunno 1-GA, Jongno-Gu, Seoul, 110-061. The Product is made available in Malaysia by Citigroup Global Markets Malaysia Sdn Bhd, which is regulated by Malaysia Securities Commission. Menara Citibank, 165 Jalan Ampang, Kuala Lumpur, 50450. The Product is made available in Mexico by Acciones y Valores Banamex, S.A. De C. V., Casa de Bolsa, Integrante del Grupo Financiero Banamex ("Accival") which is a wholly owned subsidiary of Citigroup Inc. and is regulated by Comisión Nacional Bancaria y de Valores. Reforma 398, Col. Juárez, 06600 Mexico, D.F. In New Zealand the Product is made available through Citigroup Global Markets New Zealand Ltd. (Company Number 604457), a Participant of the New Zealand Exchange Limited and regulated by the New Zealand Securities Commission. Level 19, Mobile on the Park, 157 Lambton Quay, Wellington. The Product is made available in Pakistan by Citibank N.A. Pakistan branch, which is regulated by the State Bank of Pakistan and Securities Exchange Commission, Pakistan. AWT Plaza, 1.1. Chundrigar Road, P.O. Box 4889, Karachi-74200. The Product is made available in Poland by Dom Maklerski Banku Handlowego SA an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Nadzoru Finansowego. Dom Maklerski Banku Handlowego S.A. ul. Chalubinskiego 8, 00-630 Warszawa. The Product is made available in the Russian Federation through ZAO Citibank, which is licensed to carry out banking activities in the Russian Federation in accordance with the general banking license issued by the Central Bank of the Russian Federation and brokerage activities in accordance with the license issued by the Federal Service for Financial Markets. Neither the Product nor any information contained in the Product shall be considered as advertising the securities mentioned in this report within the territory of the Russian Federation or outside the Russian Federation. The Product does not constitute an appraisal within the meaning of the Federal Law of the Russian Federation of 29 July 1998 No. 135-FZ (as amended) On Appraisal Activities in the Russian Federation. 8-10 Gashka Street, 125047 Moscow. The Product is made available in Singapore through Citigroup Global Markets Singapore Pte. Ltd., a Capital Markets Services Licence holder, and regulated by Monetary Authority of Singapore. 1 Temasek Avenue, #39-02 Millenia Tower, Singapore 039192. The Product is made available by The Citigroup Private Bank in Singapore through Citibank, N.A., Singapore branch, a licensed bank in Singapore that is regulated by Monetary Authority of Singapore. Citigroup Global Markets (Pty) Ltd. is incorporated in the Republic of South Africa (company registration number 2000/025866/07) and its registered office is at 145 West Street, Sandton, 2196, Saxonwold. Citigroup Global Markets (Pty) Ltd. is regulated by JSE Securities Exchange South Africa, South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa. The Product is made available in Spain by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. 29 Jose Ortega Y Gasset, 4th Floor, Madrid, 28006, Spain. The Product is made available in Taiwan through Citigroup Global Markets Taiwan Securities Company Ltd., which is regulated by Securities & Futures Bureau. No portion of the report may be reproduced or quoted in Taiwan by the press or any other person. No. 1, Songzhi Road, Taipei 110, Taiwan. The Product is made available in Thailand through Citicorp Securities (Thailand) Ltd., which is regulated by the Securities and Exchange Commission of Thailand. 18/F, 22/F and 29/F, 82 North Sathorn Road, Silom, Bangrak, Bangkok 10500, Thailand. The Product is made available in Turkey through Citibank AS which is regulated by Capital Markets Board. Tekfen Tower, Eski Buyukdere Caddesi # 209 Kat 2B, 23294 Levent, Istanbul, Turkey. In the U.A.E, these materials (the "Materials") are communicated by Citigroup Global Markets Limited, DIFC branch ("CGML"), an entity registered in the Dubai International Financial Center ("DIFC") and licensed and regulated by the Dubai Financial Services Authority ("DFSA") to Professional Clients and Market Counterparties only and should not be relied upon or distributed to Retail Clients. A distribution of the different CIRA ratings distribution, in percentage terms for Investments in each sector covered is made available on request. Financial products and/or services to which the Materials relate will only be made available to Professional Clients and Market Counterparties. The Product is made available in United Kingdom by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. This material may relate to investments or services of a person outside of the UK or to other matters which are not regulated by the FSA and further details as to where this may be the case are available upon request in respect of this material. Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB. The Product is made available in United States by Citigroup Global Markets Inc, which is regulated by FINRA and the US Securities and Exchange Commission. 388 Greenwich Street, New York, NY 10013. Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Limited, which is regulated by Financial Services Authority. Many European regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of investment research. The policy applicable to CIRA's Products can be found at www.citigroupgeo.com. Compensation of equity research analysts is determined by equity research management and Citigroup's senior management and is not linked to specific transactions or recommendations. The Product may have been distributed simultaneously, in

multiple formats, to the Firm's worldwide institutional and retail customers. The Product is not to be construed as providing investment services in any jurisdiction where the provision of such services would not be permitted. Subject to the nature and contents of the Product, the investments described therein are subject to fluctuations in price and/or value and investors may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. Certain investments contained in the Product may have tax implications for private customers whereby levels and basis of taxation may be subject to change. If in doubt, investors should seek advice from a tax adviser. The Product does not purport to identify the nature of the specific market or other risks associated with a particular transaction. Advice in the Product is general and should not be construed as personal advice given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. Prior to acquiring any financial product, it is the client's responsibility to obtain the relevant offer document for the product and consider it before making a decision as to whether to purchase the product.

© 2010 Citigroup Global Markets Inc. Citi Investment Research & Analysis is a division and service mark of Citigroup Global Markets Inc. and its affiliates and is used and registered throughout the world. Citi and Citi with Arc Design are trademarks and service marks of Citigroup Inc and its affiliates and are used and registered throughout the world. All rights reserved. Any unauthorized use, duplication, redistribution or disclosure is prohibited by law and will result in prosecution. Where included in this report, MSCI sourced information is the exclusive property of Morgan Stanley Capital International Inc. (MSCI). Without prior written permission of MSCI, this information and any other MSCI intellectual property may not be reproduced, disseminated or used to create any financial products, including any indices. This information is provided on an "as is" basis. The user assumes the entire risk of any use made of this information. MSCI, its affiliates and any third party involved in, or related to, computing or compiling the information hereby expressly disclaim all warranties of originality, accuracy, completeness, merchantability or fitness for a particular purpose with respect to any of this information. Without limiting any of the foregoing, in no event shall MSCI, any of its affiliates or any third party involved in, or related to, computing or compiling the information have any liability for any damages of any kind. MSCI, Morgan Stanley Capital International and the MSCI indexes are services marks of MSCI and its affiliates. The information contained in the Product is intended solely for the recipient and may not be further distributed by the recipient. The Firm accepts no liability whatsoever for the actions of third parties. The Product may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the Product refers to website material of the Firm, the Firm has not reviewed the linked site. Equally, except to the extent to which the Product refers to website material of the Firm, the Firm takes no responsibility for, and makes no representations or warranties whatsoever as to, the data and information contained therein. Such address or hyperlink (including addresses or hyperlinks to website material of the Firm) is provided solely for your convenience and information and the content of the linked site does not in anyway form part of this document. Accessing such website or following such link through the Product or the website of the Firm shall be at your own risk and the Firm shall have no liability arising out of, or in connection with, any such referenced website.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST
