

NPPP '11 unveiled; varied –ve impact across cos **Glaxo most vulnerable to proposed policy**

October 31, 2011

New Pricing Policy is a significant departure from the past

The government has proposed the new Pharmaceutical Pricing Policy 2011. This is in the draft stage and comments are solicited until 30 Nov 2011. The policy is materially different from existing policy. The new policy envisages replacing the existing pricing policy of 1995. Drugs brought under price control are determined based on essentiality for which National List of Essential Medicines 2011 (NLEM 2011) is followed. Importantly, ceiling price will be determined based on weighted average price of top three selling brands compared to cost plus basis used currently. In a way, the policy acknowledges that the market is competitive enough to keep margins and profitability of pharmaceutical companies in check. The departure from a cost-plus method would be a big relief for the industry in our view as the negative impact of price control would be relatively less.

Approx 2.8% of India Pharma market sales may be impacted

As per the proposed policy, almost 60% of the India Pharma market would come under price control. We attempted to quantify the impact of price control based on a sample of 36 products where we have pricing information. The sample accounts for ~17% of the impacted market. Based on this study, we believe industry sales may drop by of INR 15bn (2.8% of the market) as higher priced products are brought below the ceiling price (CP).

Glaxo likely to be most adversely impacted among stocks in our coverage universe

The impact on earnings is a combination of three factors – 1) percentage of overall sales in India; 2) percentage of India sales that shall come under price control and 3) current pricing. Companies with large India dependence, high coverage under price control and premium pricing would be impacted the most. Among the stocks that we cover, percentages of domestic portfolio that shall come under price control are Glaxo (63%), Ranbaxy (50%), Cipla (56%), Sun (42%), Lupin (44%), DRL (49%), Glenmark (42%), Zydus (60%). Glaxo's earnings are most at risk from the development, we believe, as beside the high percentage of the portfolio coming under price control, pricing fall is more severe due to current premium pricing. Even Ranbaxy's base business earnings are at risk on premium anti infective portfolio. We see Lupin and Dr Reddy's as relatively less impacted, based on the limited sample study.

Anchor themes

India pharmaceuticals are a play on four themes: 1) growing medicine consumption in EMs, particularly India; 2) ensuing generic opportunities in the US; 3) partnerships/alliances and M&As pursued by big pharmaceutical players for generic drugs, and 4) manufacturing and R&D outsourcing.

Nomura vs consensus

We have been relatively conservative on domestic business profitability and highlighting price regulation risk.

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See Appendix A-1 for analyst certification, important disclosures and the status of non-US analysts.

Key changes in pricing policy

The government has put up the draft of New Pharmaceutical Pricing Policy (NPPP 2011) for discussions. The proposed policy is a major departure from the existing price control policy. The table below enumerates the key differences in the proposed policy and existing policy (DPCO 1995).

Fig. 1: Comparison of the new proposed policy and the DPCO 1995

Parameters	Existing Policy (DPCO 1995)	New proposed policy (NPPP 2011)
No. of molecules covered	74	348
% of IPM sales covered	12%	60%
Determination of Ceiling price (CP)	Cost based pricing	Market based / Reference Pricing
Formula used for CP	Cost + mark up	Weighted average price (WAP) of top 3 selling brands based on MAT (moving annual total) value
CP applied to	Bulk drugs / formulations	Only formulations and all combinations with other ingredients which may be covered / uncovered by NLEM (National list of essential medicines)
Strengths	Only standard dose strengths	All standard and non-standard dose strengths
Price revision for brands based on	annual assessment of percentage change WPI of manufactured goods costs. The process is cumbersome and less transparent	

Source: AIOCD, pharmaceuticals.gov.in, Nomura research

The road to the new pricing policy

The pricing policy of 1995 was on products where market share of dominant producers are beyond a particular level. Accordingly, a list of 74 bulk drugs was identified and these drugs as well as the formulations based on these drugs (currently about 1577 in number) were brought under the price control regime. In year 2002, a new pharmaceutical pricing policy was introduced, but it was never implemented based on a Supreme Court order. Under the directive of the Supreme Court, the Ministry of Health prepared a list of essential drugs proposed under price control. The list was notified as NLEM, 2003.

In November 2004, the government set up a Task Force under the Chairmanship of Principal Advisor, Planning Commission, Dr Pronab Sen, to look into the issue of price control. The Pronab Sen Committee submitted its recommendations in September 2005, based on NLEM 2003. Later in 2011, the Ministry changed the list under NLEM and notified it as NLEM 2011. The current policy which is based on NLEM 2011 is largely based on the Pronab Sen Commission recommendations.

The policy envisages a much wider control as 60% of the market comes under price control

Under the new policy, the essentiality of drugs is the criteria for price control. From market share principle or economic criteria adopted under the existing policy, the new policy proposes to control prices of essential drugs. The essential drugs are as determined by the National List of Essential Medicine 2011 (NLEM 2011). There are 348 medicines listed under NLEM and the list contains only 34 of the 74 drugs that are currently under price control as per DPCO 1995. All strengths and formulations of the drugs in NLEM 11 and any combination containing the active ingredient mentioned in the list will be in the purview of price control. As per the Ministry, 663 formulations shall come under price control and ~ 60% of the Indian pharmaceutical market, shall come under price control. The existing policy DPCO 1995 shall remain into existence for two more years from the date the new pricing policy is adopted. Only 34 out of the 74 drugs in the current DPCO list are part of NLEM. The remaining drugs will therefore move out of price control post expiry of the two-year period.

Combining the NLEM'11 and sales reported by AIOCD, we find that approximately INR 310bn of the Indian Pharma Market will come under pricing control under the proposed policy. In the table below, we highlight the top 50 molecules and combinations that would come under price control.

Fig. 2: List of Top 50 molecules under the proposed policy

Molecule	MAT Sep 2011 Net Sales
Amoxicillin + clavulanic acid	8,820
Cefixime	7,043
Atorvastatin	6,809
Multivitamins + minerals	6,036
Glimepiride + metformin	5,502
Iron ferrous combination	5,099
Intermediate-acting, isophane (nph)	5,084
Chlorpheniramine + codeine	4,536
Azithromycin	4,203
Ceftriaxone	4,187
Pantoprazole	4,071
Ranitidine	3,935
Paracetamol	3,412
Diclofenac	3,324
Glimepiride + metformin + pioglitazone	3,107
Atenolol + amlodipine	3,018
Domperidone + Pantoprazole	2,872
Domperidone + rabeprazole	2,789
Amlodipine	2,787
Calcium + cholecalciferol	2,751
Ofloxacin	2,709
Metoprolol	2,500
Diclofenac	2,489
Enoxaparin	2,366
Amoxicillin	2,346
Ferrous ascorbate	2,235
Metformin	2,234
Cefalexin	2,215
Ibuprofen + paracetamol	2,164
Ciprofloxacin	2,122
Losartan + hydrochlorothiazide	2,095
Ofloxacin + ornidazole	2,077
Omeprazole	2,048
Losartan	1,988
Amikacin	1,971
Cefotaxime	1,949
Povidone iodine	1,935
Paracetamol + phenylephrine + chlorpheniramine	1,890
Ondansetron	1,813
Ampicillin + cloxacillin	1,793
Vitamin b complex with vitamin c only	1,785
Cefpodoxime + clavulanic acid	1,763
Ceftriaxone + sulbactam	1,742
Gliclazide + metformin	1,719
Clopidogrel	1,694
Mifepristone + misoprostol	1,679
Calcium + calcitriol	1,573
Atenolol	1,563
Guaiifenesin + terbutaline + bromhexine	1,490
Methyl prednisolone	1,483

Source: AIOCD data, Nomura research

For companies more than 40% of the portfolio shall be under price control

Based on the NLEM11 list and AIOCD sales, we analyse the percentage of a company's portfolio that would now be under price control, in case the proposed policy is accepted. Exhibit 4 enumerates the coverage for the top 50 companies. The coverage varies from a low of 41% to the maximum of 89.3%. The coverage will be relatively lower for Sun Pharma, Lupin and Glenmark and is high for Glaxo, Cadila and Ipca.

From cost-plus to market-driven price ceiling

In a major departure from the earlier policy, the new policy proposes to fix ceilings on prices based on weighted average price of the top three brands for a particular product. The cost-plus regime was cumbersome and difficult to implement. Furthermore, there were subjectivities in computing and reporting costs of production. The new policy proposes a transparent price ceiling based on market prices. In a way, the policy acknowledges that the market is competitive enough to keep the margins and profitability of pharmaceutical companies in check.

Once fixed, the price ceiling will be in place for five years with annual increases/decreases linked to WPI of Manufactured goods. This is a positive, in our view, as currently annual price hikes are only 20% of the manufacturing WPI due to intense competition. The NLEM and the ceiling price shall be reviewed and changed once in five years.

What is the impact of the price ceiling on companies?

The overall impact on companies is a function of coverage of the portfolio under price control (which we discussed in the earlier section) and pricing. It would require analysis of all impacted SKUs to assess the impact comprehensively. With limited pricing information, we aren't attempting to assess the exact impact on companies at this stage. The draft policy suggests that in pockets the price decline could be significant. As highlighted in Fig 3, for almost a third of the molecules the largest selling price would decline by more than 20%.

Fig. 3: The estimated no. of molecules that could see correction in the Highest Priced Brands as per the proposed policy

The department of pharmaceuticals estimates that 52% of the molecules would see highest priced brand prices fall between 0-5% and 32% of molecules would see a correction of more than 20%.

Range of Reduction in Ceiling Price	% of the 348 molecules under NLEM
Decrease in price of Highest Priced Brand	
between 0-5%	52%
between 5-10%	7%
between 10-15%	5%
between 15-20%	4%
more than 20%	32%

Source: pharmaceuticals.gov.in, Nomura estimates

We have studied 36 SKUs on which we have comprehensive pricing information. We also looked at pricing of top brands of companies vis-à-vis peers to assess the price point at which the company sells their products. In general, it can be assumed that the higher the pricing, the greater the risk of downside under the proposed policy.

The 36 SKUs that we studied have sales of INR 52bn, which is 17% of the total sales that shall be under price control in the proposed policy (Fig 4). Our analysis suggests that the total loss of value for these 36 SKUs is INR 2.6bn, which is 5% of sales. In the absence of a better alternative, our best guess shall be to extrapolate the sample result to the entire portfolio. This would imply that INR 15bn could be the overall sales loss, which is 2.8% of the overall pharmaceutical market.

Fig. 4: Our sample analysis suggests that drop in sales on average can be ~5% of the impacted market

Molecule	Strength	INR m		% Loss
		Sales	Loss	
Amoxicillin + Clauvinic Acid	500/125mg Tab	4184	441.9	10.6%
Amoxicillin + Clauvinic Acid	1000/200mg Inj	1267	43.95	3.5%
Atorvastatin	10mg	3341	52.6	1.6%
Atorvastatin	25mg	1864	38.8	2.1%
Atorvastatin	40mg	953	23.3	2.4%
Glimeperide+Metformin	2/500mg Tab	2205	176.4	8.0%
Glimeperide+Metformin	1/500mg Tab	1818	124.4	6.8%
Chlorpheriramine+Codeine	Syrup 100 ML	3365	76.5	2.3%
Azithromycin	500mg Tab	2330	74.5	3.2%
Azithromycin	250mg Tab	1235	47.6	3.9%
Pantoprazole	40mg Tab	2630	170	6.5%
Pantoprazole	40mg Inj	1100	45.2	4.1%
Ranitidine	150mg Tab	2760	33.1	1.2%
Paracetamol	500mg Tab	1070	34.9	3.3%
Paracetamol	650mg Tab	660	73.7	11.2%
Diclofenac	30Gm Gel	1360	29.5	2.2%
Atenolol+ Amlodipine	50/5 Mg	2610	317.6	12.2%
Domeperidone+Pantoprazole	30/40mg Tab	1570	84.6	5.4%
Domeperidone+Pantoprazole	10/20mg Tab	480	21.3	4.4%
Amlodipine	5mg Tab	2043	148.1	7.2%
Amlodipine	2.5mg Tab	453.7	34.6	7.6%
Ofloxacin	200mg Tab	1740	160.9	9.2%
Ofloxacin	400mg Tab	482	34.4	7.1%
Amoxicillin	500 mg Caps	1060	10.9	1.0%
Amoxicillin	250 mg Caps	470	7.2	1.5%
Cephalexin	500 mg Caps	700	6.6	0.9%
Cephalexin	250 mg Caps	245.3	3.5	1.4%
Enoxaparin	40mg Inj	765.6	24.36	3.2%
Ciprofloxacin	500mg Tabs	2230	69.1	3.1%
Omeprazole	20mg Tabs	1717	33.89	2.0%
Clopidogrel	75mg Tabs	1560	118.3	7.6%
Atenolol	25mg Tabs	580	4.63	0.8%
Dexametasone	0.5mg Tabs	261.5	13.9	5.3%
Sodium Valproate	200mg syrup	280	11.9	4.3%
Sodium Valproate	500mg Tab	350	5.9	1.7%
Sodium Valproate	300 mg Tab	270	6.6	2.4%

Source: AIOCD data, Nomura estimates

We believe multinational companies with premium pricing are likely to face greater potential downside. For instance, Glaxo's Augmentin 500/125mg tablet could lose INR343m in sales which is ~30% of the current sales. Glaxo's price of Augmentin is 48% higher than what we believe shall be the ceiling price under the proposed formula. Further pricing analysis of the top 10 brands of Glaxo suggests that Glaxo commands a premium of 44.3% over average market price. Among Indian companies, we see greater risk to Ranbaxy as well. This is due to the premium pricing of the anti infective portfolio which competes with low-priced players such as Mankind. We assess that the impact on Sun Pharma, Zydus Cadila and Dr Reddy's will be moderate. The impact of pricing shall be lower for Cipla and Lupin in our assessment as they typically price the products cheaper to the competition. In Fig 6 we present the average premium/discount of the top 10 brands to the average market price. In Fig 7, we present the value loss percentage of selected companies based on analysis of samples.

Fig. 5: Sales of Top 50 companies under coverage as per proposed policy

Net Sales in INR bn	Total Company Sales under proposed policy	Total Company Net Sales	% Coverage
IPM	309.70	557.97	55.5%
Glaxosmithkline	16.51	26.11	63.2%
Cipla	15.36	27.53	55.8%
Piramal Healthcare	14.62	23.60	61.9%
Ranbaxy Laboratories	13.05	26.34	49.5%
Zydus Cadila	12.75	21.40	59.5%
Alkem Laboratories	12.37	16.32	75.8%
Sun Pharmaceutical	10.73	25.42	42.2%
Mankind	9.59	15.42	62.2%
Aristo	8.27	12.63	65.5%
Pfizer	7.69	12.83	60.0%
Lupin	7.66	17.25	44.4%
Ipca Laboratories	6.74	9.48	71.1%
Usv	6.34	9.16	69.2%
Novartis	6.28	9.39	66.9%
Macleods	6.26	12.01	52.1%
Sanofi-Aventis	6.10	11.89	51.3%
Intas	6.05	13.61	44.4%
Dr. Reddys Laboratories	5.88	12.01	49.0%
Micro Labs	5.88	9.87	59.6%
Wockhardt	5.53	10.87	50.9%
Fdc	4.94	7.18	68.9%
Torrent	4.55	8.82	51.6%
Novo Nordisk	4.43	5.29	83.7%
Glenmark	4.15	10.00	41.5%
Unichem Laboratories	4.11	6.51	63.1%
Alembic	4.05	7.74	52.3%
Franco N	3.91	4.61	84.7%
Emcure	3.65	5.46	66.9%
Cadila	3.62	4.47	80.9%
Elder	3.53	6.22	56.7%
Wyeth	3.38	4.66	72.5%
Abbott	3.04	6.91	44.0%
Jb Chemicals	2.69	3.01	89.3%
Indoco Remedies	2.68	4.36	61.4%
Biochem	2.41	2.82	85.4%
Zuventus	2.24	3.44	65.3%
Blue Cross	2.08	2.92	71.2%
Medley	2.05	2.44	84.1%
Win-Medicare	1.97	2.74	71.7%
Merck	1.74	3.64	47.7%
Astrazeneca	1.70	3.28	51.6%
Bharat Serums & Vaccines	1.64	2.52	65.2%
Meyer Organics	1.62	2.57	63.1%
Maneesh	1.57	2.01	78.1%
Eli Lilly	1.57	1.92	81.7%
Hetero Healthcare	1.47	2.17	68.0%
Eris Life Sciences	1.46	2.90	50.2%
Apex Laboratories	1.44	1.76	81.9%
Shreya Life Sciences	1.42	2.19	64.8%
Troikaa	1.40	1.78	78.4%

Source: AIOCD, Nomura estimates

Fig. 6: Brand pricing by select companies (based on Top 10 brands sample)

We present the average premium / discount to average competitor pricing for Top 10 brands of select companies

Company	Pricing premium / (discount)
Cipla	-6.9%
Dr. Reddy's	27.5%
Glaxosmithkline	44.3%
Glenmark	40.5%
IPCA	11.9%
Lupin	-6.1%
Pfizer	21.8%
Ranbaxy	18.6%
Sanofi	9.9%
Sun Pharma	17.0%
Zydus Cadila	38.2%

Source: AIOCD data, Nomura estimates

Greater relaxation for drugs outside the purview of price control

The policy proposes to allow increase up to 15% annually for selected drugs outside the purview of price control, compared to 10% earlier.

Patented drugs

There is no specific proposal for controlling prices of patented drugs. However, the policy document states that decisions on price control of patented drugs will be taken based on the recommendation of the Committee constituted by the Government order dated 21st December, 2006 for finalizing the pricing of Patented Drugs.

Analysing the impact on financials

We make an assessment of the impact on the overall financials of the proposed policy. The impact on earnings is a combination of three factors – 1) percentage of overall sales in India; 2) percentage of India sales that shall come under price control and 3) current pricing. Companies with large India dependence, high coverage under price control and premium pricing would be impacted the most, we believe. Therefore, Glaxo's earnings would be most at risk from the development, according to our estimates.

In Fig 7, we indicate the impact of price control as a percentage of FY12 EBITDA for companies in our coverage universe. This is based on extrapolating the results of the sample study that we conducted to the entire India portfolio. In Fig 7 we also highlight the percentage of the impacted portfolio that is captured through the sample study. The coverage is approx 25-40% for most companies. It is low for Lupin and Glenmark and hence the impact assessment for these companies can be less accurate. We appreciate that there can be material quantitative differences between the actual impact and what our sample study suggests. However, the assessment does help us get a direction and a sense of the relative impact.

As the analysis suggests, even Ranbaxy's base business earnings would be at significant risk. We see Lupin and Dr Reddy's relatively less impacted.

Fig. 7: Estimated impact of the proposed policy on company's profitability

Company	MAT Sep 2011 Sales under price control (a)	Sales of brands considered for impact analysis (b)	Sample size in % =(a/b)	Value loss in sample due to price control (c)	Value loss in % =d=(c/b)	Loss extrapolated to total sales under price control =e=(d*a)	FY12E EBITDA (f)	Loss as a % of overall FY12E EBITDA =(e/f)
Ranbaxy	1,305	482	36.9%	49	10.1%	132	2,322	5.7%
Glaxosmithkline	1,651	387	23.4%	40	10.2%	169	855	19.7%
Zydus Cadila	1,275	376	29.5%	18	4.7%	59	1,188	5.0%
Cipla	1,536	338	22.0%	12	3.5%	53	1,662	3.2%
Sun Pharma	1,073	286	26.6%	18	6.3%	68	2,721	2.5%
Dr. Reddy's	588	248	42.1%	14	5.8%	34	2,384	1.4%
Lupin	766	135	17.6%	2	1.6%	12	1,322	0.9%
Glenmark	415	20	4.9%	1	6.1%	25	955	2.7%

Source: AIOCD data, Nomura estimates

Appendix A-1

Analyst Certification

We, Saion Mukherjee and Aditya Khemka, hereby certify (1) that the views expressed in this Research report accurately reflect our personal views about any or all of the subject securities or issuers referred to in this Research report, (2) no part of our compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this Research report and (3) no part of our compensation is tied to any specific investment banking transactions performed by Nomura Securities International, Inc., Nomura International plc or any other Nomura Group company.

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Cadila Healthcare	CDH IN	INR 772	28-Oct-2011	Buy	Not rated	
Cipla	CIPLA IN	INR 298	28-Oct-2011	Neutral	Not rated	
Dr Reddy's Laboratories	DRRD IN	INR 1671	28-Oct-2011	Buy	Not rated	
GlaxoSmithKline Pharmaceuticals	GLXO IN	INR 2121	28-Oct-2011	Neutral	Not rated	
Glenmark Pharmaceuticals	GNP IN	INR 303	28-Oct-2011	Buy	Not rated	1
Lupin	LPC IN	INR 475	28-Oct-2011	Buy	Not rated	
Ranbaxy Laboratories	RBXY IN	INR 515	28-Oct-2011	Reduce	Not rated	4
Sun Pharmaceutical Industries	SUNP IN	INR 510	28-Oct-2011	Neutral	Not rated	

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Previous Rating

Issuer name	Previous Rating	Date of change
Cadila Healthcare	Not Rated	11-Jan-2011
Cipla	Reduce	17-Mar-2011
Dr Reddy's Laboratories	Not Rated	11-Dec-2008
GlaxoSmithKline Pharmaceuticals	Buy	19-May-2010
Glenmark Pharmaceuticals	Not Rated	16-Dec-2008
Lupin	Not Rated	30-Jan-2009
Ranbaxy Laboratories	Neutral	29-Apr-2009
Sun Pharmaceutical Industries	Reduce	28-May-2010

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Explanation of Nomura's equity research rating system for Asian companies under coverage ex Japan published from 30 October 2008 and in Japan from 6 January 2009

STOCKS

Stock recommendations are based on absolute valuation upside (downside), which is defined as $(\text{Target Price} - \text{Current Price}) / \text{Current Price}$, subject to limited management discretion. In most cases, the Target Price will equal the analyst's 12-month intrinsic valuation of the stock, based on an appropriate valuation methodology such as discounted cash flow, multiple analysis, etc.

A **'Buy'** recommendation indicates that potential upside is 15% or more. A **'Neutral'** recommendation indicates that potential upside is less than 15% or downside is less than 5%. A **'Reduce'** recommendation indicates that potential downside is 5% or more. A rating of **'Suspended'** indicates that the rating and target price have been suspended temporarily to comply with applicable regulations and/or firm policies in certain circumstances including when Nomura is acting in an advisory capacity in a merger or strategic transaction involving the subject company. Securities and/or companies that are labelled as **'Not rated'** or shown as **'No rating'** are not in regular research coverage of the Nomura entity identified in the top banner. Investors should not expect continuing or additional information from Nomura relating to such securities and/or companies.

SECTORS

A **'Bullish'** rating means most stocks in the sector have (or the weighted average recommendation of the stocks under coverage is) a positive absolute recommendation. A **'Neutral'** rating means most stocks in the sector have (or the weighted average recommendation of the stocks under coverage is) a neutral absolute recommendation. A **'Bearish'** rating means most stocks in the sector have (or the weighted average recommendation of the stocks under coverage is) a negative absolute recommendation.

Explanation of Nomura's equity research rating system in Japan published prior to 6 January 2009 (and ratings in Europe, Middle East and Africa, US and Latin America published prior to 27 October 2008)

STOCKS

A rating of '1' or **'Strong buy'**, indicates that the analyst expects the stock to outperform the Benchmark by 15% or more over the next six months. A rating of '2' or **'Buy'**, indicates that the analyst expects the stock to outperform the Benchmark by 5% or more but less than 15% over the next six months. A rating of '3' or **'Neutral'**, indicates that the analyst expects the stock to either outperform or underperform the Benchmark by less than 5% over the next six months. A rating of '4' or **'Reduce'**, indicates that the analyst expects the stock to underperform the Benchmark by 5% or more but less than 15% over the next six months. A rating of '5' or **'Sell'**, indicates that the analyst expects the stock to underperform the Benchmark by 15% or more over the next six months.

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SECTORS

A **'Bullish'** stance, indicates that the analyst expects the sector to outperform the Benchmark during the next six months. A **'Neutral'** stance, indicates that the analyst expects the sector to perform in line with the Benchmark during the next six months. A **'Bearish'** stance, indicates that the analyst expects the sector to underperform the Benchmark during the next six months.

Benchmarks are as follows: **Japan:** TOPIX; **United States:** S&P 500, MSCI World Technology Hardware & Equipment; **Europe,** by sector - *Hardware/Semiconductors:* FTSE W Europe IT Hardware; *Telecoms:* FTSE W Europe Business Services; *Business Services:* FTSE W Europe; *Auto & Components:* FTSE W Europe Auto & Parts; *Communications equipment:* FTSE W Europe IT Hardware; **Ecology Focus:** Bloomberg World Energy Alternate Sources; **Global Emerging Markets:** MSCI Emerging Markets ex-Asia.

Explanation of Nomura's equity research rating system for Asian companies under coverage ex Japan published prior to 30 October 2008

STOCKS

Stock recommendations are based on absolute valuation upside (downside), which is defined as $(\text{Fair Value} - \text{Current Price}) / \text{Current Price}$, subject to limited management discretion. In most cases, the Fair Value will equal the analyst's assessment of the current intrinsic fair value of the stock using an appropriate valuation methodology such as Discounted Cash Flow or Multiple analysis etc. However, if the analyst doesn't think the market will revalue the stock over the specified time horizon due to a lack of events or catalysts, then the fair value may differ from the intrinsic fair value. In most cases, therefore, our recommendation is an assessment of the difference between current market price and our estimate of current intrinsic fair value. Recommendations are set with a 6-12 month horizon unless specified otherwise. Accordingly, within this horizon, price volatility may cause the actual upside or downside based on the prevailing market price to differ from the upside or downside implied by the recommendation.

A **'Strong buy'** recommendation indicates that upside is more than 20%. A **'Buy'** recommendation indicates that upside is between 10% and 20%. A **'Neutral'** recommendation indicates that upside or downside is less than 10%. A **'Reduce'** recommendation indicates that downside is between 10% and 20%. A **'Sell'** recommendation indicates that downside is more than 20%.

SECTORS

A **'Bullish'** rating means most stocks in the sector have (or the weighted average recommendation of the stocks under coverage is) a positive absolute recommendation. A **'Neutral'** rating means most stocks in the sector have (or the weighted average recommendation of the stocks under coverage is) a neutral absolute recommendation. A **'Bearish'** rating means most stocks in the sector have (or the weighted average recommendation of the stocks under coverage is) a negative absolute recommendation.

Target Price

A Target Price, if discussed, reflect in part the analyst's estimates for the company's earnings. The achievement of any target price may be impeded by general market and macroeconomic trends, and by other risks related to the company or the market, and may not occur if the company's earnings differ from estimates.

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