

Company Focus

23 November 2007 | 16 pages

GAIL (GAIL.BO)

 Target price change
 Estimate change

Buy: Leverage to KG Gas More Visible, Upgrade TP to Rs482

- Maintain Buy with new target of Rs482** — GAIL is set to benefit from KG gas and other discoveries on East Coast, notwithstanding Reliance's captive pipeline. Though less leveraged than some of its smaller peers (viz. GSPL), GAIL's valuations are also undemanding and do not factor in potential value accretion from the proposed pipeline expansions.
- Gearing up for the gas deluge** — GAIL will lay 5 new pipelines and upgrade 3 existing ones by 2011 at a cost of Rs180bn. Increasing visibility on East coast (KG, Cauvery, Mahanadi) implies meaningful utilisation of 140mscmd expansion is only a matter of time. Given the assured ~14% ROE, we incorporate value accretion of Rs36/share based on P/BV of 1.5x equity contribution (Rs90bn), discounted back by 4 years.
- Earnings revised upwards** — Higher petrochem prices, reasonable subsidy burden and higher gas flow (from 77mscmd in FY07 to 126mscmd in FY10E) are the key reasons for earnings upgrades of 6-12% over FY08-09E. High crude prices will support absolute petrochem prices even as GAIL's gas feedstock has already moved to market prices.
- Significant value in cash + investments** — We estimate the value of net cash and investments at Rs167/share (incl. Myanmar gas find) as on Mar-08, which provides downside support to the valuations. Exposure to more E&P blocks and evolution of city gas in the long term (3-5 years) could provide further upside.

Buy/Low Risk	1L
Price (22 Nov 07)	Rs426.20
Target price	Rs482.00
	<i>from Rs323.00</i>
Expected share price return	13.1%
Expected dividend yield	2.8%
Expected total return	15.9%
Market Cap	Rs360,417M
	US\$9,177M

Price Performance (RIC: GAIL.BO, BB: GAIL IN)



Statistical Abstract

Year to	Net Profit	Diluted EPS	EPS growth	P/E	P/B	ROE	Yield
31 Mar	(RsM)	(Rs)	(%)	(x)	(x)	(%)	(%)
2006A	23,101	27.32	18.2	15.6	3.6	24.8	2.3
2007A	20,467	24.20	-11.4	17.6	3.2	19.2	2.3
2008E	24,759	29.28	21.0	14.6	2.8	20.5	2.8
2009E	27,271	32.25	10.1	13.2	2.5	20.1	2.8
2010E	30,397	35.95	11.5	11.9	2.2	19.9	3.1

Source: Powered by dataCentral

Rahul Singh¹

 +91-22-6631-9863
 rahul.r.singh@citi.com

Saurabh Handa¹

 +91-22-6631-9858
 saurabh.handa@citi.com

Garima Mishra¹

garima.mishra@citi.com

See Appendix A-1 for Analyst Certification and important disclosures.

Citi Investment Research 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. Non-US research analysts who have prepared this report are not registered/qualified as research analysts with the NYSE and/or NASD. 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.

¹Citigroup Global Markets India Private Limited

Fiscal year end 31-Mar	2006	2007	2008E	2009E	2010E
Valuation Ratios					
P/E adjusted (x)	15.6	17.6	14.6	13.2	11.9
EV/EBITDA adjusted (x)	9.3	10.7	9.2	8.2	7.2
P/BV (x)	3.6	3.2	2.8	2.5	2.2
Dividend yield (%)	2.3	2.3	2.8	2.8	3.1
Per Share Data (Rs)					
EPS adjusted	27.32	24.20	29.28	32.25	35.95
EPS reported	27.32	24.20	29.28	32.25	35.95
BVPS	117.94	134.72	150.80	169.85	191.50
DPS	10.00	10.00	12.00	12.00	13.00
Profit & Loss (RsM)					
Net sales	163,330	160,220	169,333	193,475	228,576
Operating expenses	-132,794	-135,234	-139,015	-159,667	-190,096
EBIT	30,536	24,986	30,317	33,809	38,480
Net interest expense	-1,173	-1,072	-888	-770	-700
Non-operating/exceptionals	4,155	4,607	5,443	5,371	5,032
Pre-tax profit	33,518	28,521	34,872	38,410	42,813
Tax	-9,666	-8,130	-10,113	-11,139	-12,416
Extraord./Min.Int./Pref.div.	-752	77	0	0	0
Reported net income	23,101	20,467	24,759	27,271	30,397
Adjusted earnings	23,101	20,467	24,759	27,271	30,397
Adjusted EBITDA	36,131	30,740	36,386	40,815	46,424
Growth Rates (%)					
Sales	20.3	-1.9	5.7	14.3	18.1
EBIT adjusted	11.6	-18.2	21.3	11.5	13.8
EBITDA adjusted	-1.9	-14.9	18.4	12.2	13.7
EPS adjusted	18.2	-11.4	21.0	10.1	11.5
Cash Flow (RsM)					
Operating cash flow	35,212	11,809	39,800	34,119	38,256
Depreciation/amortization	5,595	5,754	6,068	7,006	7,943
Net working capital	6,516	-14,412	8,972	-158	-85
Investing cash flow	-12,355	-18,156	-25,000	-25,000	-25,000
Capital expenditure	-5,761	-17,951	-25,000	-25,000	-25,000
Acquisitions/disposals	-6,594	-205	0	0	0
Financing cash flow	-7,543	-15,480	-12,541	-13,163	-12,093
Borrowings	-808	-5,787	-1,379	-2,000	0
Dividends paid	-9,643	-9,693	-11,163	-11,163	-12,093
Change in cash	15,314	-21,827	2,259	-4,043	1,163
Balance Sheet (RsM)					
Total assets	169,418	167,757	191,776	207,739	229,729
Cash & cash equivalent	44,959	26,604	37,032	32,989	34,997
Accounts receivable	7,535	7,907	9,407	10,749	12,699
Net fixed assets	81,716	93,913	112,845	130,839	147,895
Total liabilities	69,685	53,828	64,250	64,105	67,790
Accounts payable	15,202	14,484	15,208	15,968	16,767
Total Debt	19,166	13,379	12,000	10,000	10,000
Shareholders' funds	99,733	113,929	127,526	143,634	161,939
Profitability/Solvency Ratios (%)					
EBITDA margin adjusted	22.1	19.2	21.5	21.1	20.3
ROE adjusted	24.8	19.2	20.5	20.1	19.9
ROIC adjusted	25.7	18.8	18.9	18.5	18.5
Net debt to equity	-25.9	-11.6	-19.6	-16.0	-15.4
Total debt to capital	16.1	10.5	8.6	6.5	5.8

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



Earnings go up on all-round improvement

GAIL's 1HFY08 performance has been a result of 1) high petrochemical prices and production (post-expansion of HDPE), 2) high net LPG realisation (as subsidy formula has reverted to 1/3rd) and 3) recovery in gas transmission volumes from spot LNG, etc.

Our earnings upgrade of 6-12% over FY08-09E is therefore a function of:

1. Higher gas transmission volumes in FY09E, now at 98mscmd (82mscmd in FY08E) on improved visibility on RIL's gas supplies from July 2008. A meaningful portion of the 40-80mscmd from KG-D6 is likely to flow through GAIL's existing customers on HVJ/DVPL/GREP network due to the lack of readiness of new gas-based power projects to offtake gas.
2. Higher petrochemical prices esp. given that high crude/naphtha prices will likely keep absolute PE prices robust. Absolute PE prices are more critical determinant of GAIL's profitability vis-à-vis Ethylene-Naphtha spread as its feedstock prices (rich natural gas) are relatively sticky. GAIL is anyway paying market price of US\$4.75/mmbtu for the feedstock gas and despite ONGC's demand for differential C2/C3 pricing, it is unlikely as long as GAIL is bearing petroleum subsidies.
3. Upstream's share of subsidies on retail petroleum products has reverted to 33% in FY08 after increasing to 40% in FY07. Even if we assume 35% sharing in our base case, GAIL's net LPG realisation is set to improve from US\$242/tonne in FY07 to US\$333/tonne in FY08 and beyond.

However, despite the upgrade, earnings growth at 10-11%pa will remain moderate over FY08-10E mainly due lower petrochemical and LPG profitability. Gas transmission contribution to EBITDA is likely to increase from 51% in FY07 to ~60% in FY10E.

Figure 1. GAIL- Earnings Revision

Year to	Net Profit (Rs Mils.)		Diluted EPS (Rs)			Dividend Per Share (Rs)	
	Old	New	Old	New	% Chg	Old	New
31-Mar							
2008E	23,347	24,759	27.61	29.28	6.0%	10.0	12.0
2009E	24,377	27,271	28.83	32.25	11.9%	9.0	12.0
2010E	-	30,397	-	35.94		-	13.0

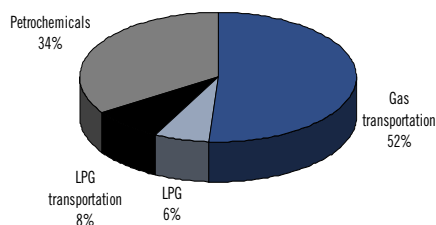
Source: Citi Investment Research estimates

Figure 2. Key Assumptions

Year to 31-Mar	2007	2008E	2009E	2010E
Volumes				
Gas transmission volumes (mmscmd)	77.3	82.2	98.5	126.0
LPG sales (mn tonnes)	1.04	1.05	1.11	1.17
Other liquid hydrocarbons ('000 tonnes)	290	300	316	333
HDPE/LDPE sales ('000 tonnes)	347	400	420	440
Realisation				
Transmission margin -HVJ/DVPL/GREP (Rs/'000scm)	1,060	1,060	1,010	960
Margins on Shipper volumes (Rs/'000scm)	634	634	634	634
Net LPG realisation (US\$/t)	242	333	333	333
HDPE/LDPE (Rs/kg)	70.8	68.9	63.8	63.8
LPG transmission				
Volumes (mn tonnes)	2.49	2.63	2.78	2.94
Avg. transmission charge (Rs/t)	1,429	1,452	1,475	1,498

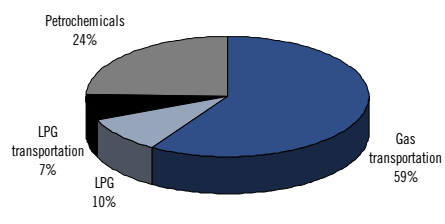
Source: Citi Investment Research estimates

Figure 3. EBITDA Break-up (FY2007)



Source: Citi Investment Research

Figure 4. EBITDA Break-up (FY2010E)



Source: Citi Investment Research

Valuation – Existing + New pipelines + investments

Given the increased potential of indigenous gas supplies from the East Coast basins (KG, Cauvery, Mahanadi) and GAIL's now visible pipeline plans, we now explicitly factor in potential value creation from the expansion plans. Though the increase in capacity by 140mmcmd will take some time to fill-up, it is a matter of time, maybe FY13-14E, by when KG D6 would plateau and other East Coast discoveries would have commenced production.

In addition, the Cost of Services method (COS), while assuring post-tax ROE of ~14% (similar to that assumed in arriving at HVJ/DVPL tariffs), also allows for upward adjustment of tariffs if volumes are lower than normative levels. This provides greater predictability in GAIL's return on equity on the pipeline capex. Our valuation approach therefore comprises the Existing Business value + New pipelines value accretion + value of investments & Myanmar gas.

1. **Existing business valued at Rs309/share.** We value existing business at EV/E of 6.5x FY08E, which does not incorporate any growth from the proposed pipeline assets. Though there are cyclical components to earnings (petrochemical, LPG), it is offset by the superior feedstock (natural gas) and subsidy on LPG which reduces its contribution to mid-cycle levels (net realisation on LPG is US\$333/tonne vs. US\$800/tonne at present). Existing business value at Rs309/share imputes PER of ~10x FY08E, which is reasonable given GAIL's low cost of equity. This also works out to P/BV of 1.6x FY08E based on adjusted book (adding back the excess depreciation on pipelines prior to FY05).
2. **Value accretion from new pipelines at Rs36/share.** Though the normative ROE is likely to be ~14%, we believe GAIL can earn an additional 100-200bps given the possibility of opex savings, etc. Given the low cost of equity for GAIL, the P/BV of 1.5x can be justified. The value accretion from equity investments in new pipelines (50% of Rs180bn) is therefore calculated as 1.5x equity contribution less the equity contribution itself i.e. Rs90bn. The resultant value is discounted back by 4 years, assuming reasonable pipeline utilisation by FY13.
3. **Value of investments at Rs137/share.** This includes value of investments in ONGC, other gas utilities (IGL, MGL, PLNG) and 10% interest in Myanmar gas find (OGIP of 10tcf, recovery of 70% and EV/boe of US\$4.0).

Figure 5. Valuation Framework

EV/EBITDA	6.5	
Equity value of current business	309	On FY08E EBITDA
Value of investments	137	ONGC, Gas utilities, Myanmar
Value accretion from new pipelines	36	Based on P/B of 1.5x
Target price (Rs)	482	

Source: Citi Investment Research

Figure 6. Value of investments

Stake in ONGC (2.4%)	73	At CMP
Stake in IGL (22.5%)	6	At CMP
Stake in Petronet LNG (12.5%)	11	At CMP
Stake in Mahanagar Gas (50%)	12	Assuming MGL = IGL mkt cap
Stake in China Gas Holdings Ltd.	4	@ CMP = HK\$3.55
Other investments (Dabhol, Fayum, etc.)	6	At book value
Myanmar gas (10% stake in A-1,A-3)	24	OGIP=10tcf, 70% recovery, EV/boe of US\$4
Total (Rs)	137	

Source: Citi Investment Research

Though some of its peers viz. GSPL, Gujarat Gas are more leveraged to increasing gas supplies from East Coast, we believe that GAIL's complementary pipeline plans (to Reliance Group's proposed pipelines) make it strongly positioned to supply gas in the energy hungry West and South India besides serving parts of East/South markets. In this context, we believe that GAIL's valuations are still reasonable vis-à-vis its smaller peers (see table below). Though the valuation discount has been blamed on cyclical components in GAIL's EBITDA and low volume growth in the past, we believe it is now offset by 1) mid-cycle profitability of LPG due to subsidies, 2) high absolute petrochem prices due to high naphtha and GAIL's advantage of being a gas-based producer and 3) Improving leverage to KG gas.

Figure 7. Valuation Comparison

Company Name	RIC Code	Rating	Mkt cap (US\$m)	Share price 21-Nov-07	Target price	P/E (x)		Price/CEPS (x)		EV/EBITDA (x)		P/BV (x)		Div. Yield (%)	
						FY08E	FY09E	FY08E	FY09E	FY08E	FY09E	FY08E	FY09E	FY08E	FY09E
GAIL	GAIL.BO	1L	9,074	421	482	14.4	13.1	11.6	10.4	9.4	8.1	2.8	2.5	2.8%	2.8%
Indraprastha Gas	IGAS.BO	1L	532	149	160	12.9	11.4	9.2	7.9	6.7	5.9	3.6	3.0	2.3%	2.7%
Gujarat Gas*	GGAS.BO	1L	554	339	350	16.6	13.5	12.8	10.5	10.2	8.4	4.0	3.2	0.9%	0.9%
Gujarat State Petronet	GSPT.BO	1M	1,044	73	74	54.7	36.8	16.2	12.0	13.5	10.4	3.7	3.4	0.5%	0.8%
Petronet LNG	PLNG.BO	3M	1,885	99	78	21.0	18.1	16.3	14.4	11.7	10.8	4.9	4.2	1.5%	1.5%

Source: Powered by dataCentral *Using CY07E and CY08E (31-Dec year-ending).

GAIL's Pipeline Plans firmed up now

GAIL was the original advocate of the National Gas Grid in 2003-04 when Reliance gas supplies promised to become more meaningful. Subsequent to that, RIL decided and got approval for some of the strategically important and lucrative pipeline routes namely Kakinada-Uran, Kakinada-Chennai-Tuticorin and Kakinada-Haldia.

GAIL had to accordingly scale down its pipeline plans. The Government approved plans for 5 new pipelines and upgrades of 3 existing pipelines (at a total cost of Rs180bn) is now complementary to Reliance's pipeline plans. Though none of GAIL's pipelines are originating from Kakinada, we believe that the energy-hungry North & Western regions plus parts of South and East India will be eventually served by GAIL's gas pipelines. Reliance's MOU with GAIL to interconnect the two pipeline networks reflects that.

Figure 8. GAIL's Pipeline Projects

	Pipeline	Existing capacity (mmscmd)	Proposed increase (mmscmd)	Length	Cost (Rs bn)
Phase I by 2009					
	DVPL/GREP Upgradation	24	54	1115	22
	Dadri-Bawana-Nangal	-	25	610	25
	Chainsa-Jhajjar-Hissar	-	25	310	10
Phase II by 2011					
	DVPL/GREP Upgradation	54	74	1115	30
	Vijaipur-Jagadishpur upgrade	12	24	571	20
	Dabhol-Bangalore	-	12	730	25
	Kochi-Mangalore-Bangalore	-	12	840	25
	Jagadishpur-Haldia	-	12	876	20
Total		90	238	5,052	177

Source: Company Reports

Figure 9. Projects Completed

Project	Project cost (Rs bn)	Date of commissioning
Dahej Uran (DUPL)	18.3	May-07
Dabhol-Panvel (DPPL)	13.3	May-07
Jagoti-Pithampur p/l	2.0	Apr-07
Vijaipur-Kota p/l	3.0	Jan-07
Kelarus-Malanpur p/l	1.1	July-06
Thulendi-Phulpur p/l	2.2	May-06

Source: Company Reports

GAIL

Company description

GAIL is the dominant gas transmission and distribution company in India. Its arterial HBJ pipeline is India's largest. GAIL's other business divisions are LPG pipelines, LPG fractionation and petrochemicals.

Investment strategy

We have a Buy/Low Risk (1L) rating as GAIL provides a unique investment opportunity as a dominant gas pipeline owner and transporter in India. Increasing gas supplies and the reduced potential for falling pipeline charges remain the key positives. GAIL is also building 5 new pipelines and upgrading 3 existing pipelines in order to gear up for the imminent increase in gas supplies from the East Coast. Assured ROE on pipeline investments reduces risks and provides visibility for value creation from the additional investments of Rs180bn over next 4-5 years. GAIL has lower exposure to petroleum subsidies than its peers, and we expect the company's exposure to continue to be manageable. This should offset the adverse impact of a gas price hike on GAIL's internal consumption. The company's exposure to petrochemicals (ethylene chain) benefits from high prices of liquid feedstock as its feedstock prices are relatively stable and much lower than naphtha.

Valuation

Our target price for GAIL of Rs482 is based on a) Existing Business Value of Rs303 based on EV/EBITDA of 6.5x FY08E, b) the value of investments/E&P assets (Rs137/share) and c) value accretion from new pipelines at Rs36/share (based on P/B of 1.5x. The existing business value at Rs303 imputes FY08E PER of 10.5x and P/BV of 1.6x, reasonable given its growth outlook and ROEs. Given the increased potential of indigenous gas supplies from the East Coast basins (KG, Cauvery, Mahanadi) and GAIL's now firm pipeline plans, we now explicitly factor in potential value accretion from the expansion capex. The value accretion from equity investments in new pipelines (50% of Rs180bn) is therefore calculated as 1.5x equity contribution less the equity contribution itself i.e. Rs90bn. The resultant value is discounted back by 4 years, assuming reasonable pipeline utilisation by FY13.

Risks

We rate GAIL as Low Risk based on our quantitative risk-rating system. The main risks that could impede the stock from reaching our target price are as follows: (1) a further cut in transportation tariffs; (2) GAIL's petrochemical business is cyclical in nature; (3) changes in government policy for the oil & gas sector will likely remain a risk to earnings and stock sentiment; and (4) any change in pricing of C2/C3 fractions of the rich gas, which acts as feedstock for GAIL's petrochemical/LPG units, could impact earnings.

Valuation & Risks: Other Companies

Indraprastha Gas (IGAS.BO - Rs142.65; 1L)

Valuation: Our target price of Rs160 for IGL is based on DCF. We prefer to use DCF, as it captures the value of the projects over their lifetime. IGL's near-term cash flow is affected by its aggressive expansion. In our DCF analysis, we have used explicit forecasts for four years, a terminal growth rate of 2%, and a WACC of 10.9% (based on a stock beta of 0.6). Our target P/CEPS of 8.2x FY09E is still at a small discount to current multiples of other gas utilities, which we believe is very reasonable given the higher capital returns parameters and lower regulatory scrutiny on margins. We prefer to use P/CEPS as a comparison due to the utility nature of IGL's business and the high depreciation rates on its assets.

Risks: We rate IGL Low Risk based on our quantitative risk-rating system. The downside risks to our target price include: (1) stronger than anticipated growth in alternative modes of public transport could impact CNG demand; (2) delays in conversion of LCVs to CNG could also impact demand; (3) further deregulation/hike in administered gas prices, with no corresponding hike in CNG prices, could put pressure on margins; and (4) delays in implementation of projects in the NCR region could impact PNG volume growth.

Gujarat Gas (GGAS.BO - Rs331.80; 1L)

Valuation: Our DCF-based valuation for Ggas is Rs350, on which our target price is based. Our DCF assumes a WACC of 11.0%, four years of explicit forecasts, and a terminal growth rate of 3% thereafter. We prefer DCF to value the company given the utility nature of the business, which ensures steady cash flows. Discounted cash flows also capture the value of the business over a longer term, given the new investments being made in the business and the longer-term growth opportunity for the retail gas distribution business in India. Our target price equates to a P/E of 14x 2008E, in-line with the BSE Sensex multiples. We believe this is justified due to the stable earnings profile and visible earnings growth.

Risks: We assign a Low Risk rating to Ggas based on our quantitative risk-rating system. Government/regulatory interference in gas pipeline tariffs could impact Ggas' earnings. The gas business typically involves take-or-pay clauses and Ggas' inability to sell gas contracted could lead to financial losses, while suppliers' inability to supply could lead to one-off gains. Some of Ggas' supply agreements are denominated in US\$ terms, and therefore subject to currency fluctuation risks. Most of Ggas' purchased gas prices are linked to market prices of fuels. Sharp fluctuations in gas prices which Ggas is unable to pass on to its consumers could impact margins. GSPL's commissioning of a parallel pipeline in the Hazira-Ankleshwar section has impacted Ggas' transmission business. Reduction of gas supplies from GAIL could impact margins and profits adversely. If any of these risk factors has a greater impact than we expect, Ggas' share price will likely have difficulty attaining our target price. If market prices of natural gas come off sharply amid increased availability, Ggas' margins and earnings could be higher than our expectations.

Gujarat State Petronet (GSPT.BO - Rs70.50; 1M)

Valuation: Our target price of Rs74 is based on our DCF fair value for Sep-08E. Our DCF is based on gas volumes tied up with Reliance (11-20mmscmd) and the capex associated with the deal (Rs6bn). We use DCF to value the company given the utility nature of the business, which ensures steady cash flows. Discounted cash flows also capture the value of the business over a longer term. Our DCF valuation is based on five years of explicit forecasts, 23% CAGR of committed volumes over FY07-12E, FY12E volumes of 45mmscmd, and terminal growth of 3%. We use a WACC of 10.5% (risk free 8.0%, risk premium 6.0%, beta of 0.75, target D/E ~40%). Also, on a price/cash earnings basis, we think GSPL is at a justifiable premium to other gas utilities (9.6x FY09E) given our high growth expectations of its gas transmission business (EPS CAGR of 28% over FY07-10E). We prefer P/CEPS to the more traditional P/E multiple as a valuation benchmark given GSPL's aggressive depreciation policy.

Risks: We assign a Medium Risk rating to GSPL based on our quantitative risk-rating system. The key downside risks to our target price include: 1) Government regulation of gas pipeline tariffs - with the setting up of the Petroleum and Natural Gas Regulatory Authority, pipeline tariffs across India could come under scrutiny. 2) Gas supplies - we assume a 23% CAGR in gas volumes for GSPL. If supplies are lower than our expectations, this could impact earnings and valuations. 3) Project risk - GSPL is implementing expansion of its pipeline network that is subject to time and cost over-runs that could impact earnings. If any of these factors has a greater impact than we expect, the stock could have difficulty achieving our target price.

Petronet LNG (PLNG.BO - Rs92.40; 3M)

Valuation: Our target price of Rs78 is based on 10% discount to our DCF-based fair value estimate of Rs87 for March 2008. We believe a 10% discount is justified given the back-ended nature of the returns from the project. We use a DCF-based valuation, as we think it captures the value of the projects over their lifetime, especially given that PLL's near-term cash flow is affected by its aggressive expansion. In our DCF analysis, we have used explicit forecasts for 10 years, a terminal growth rate of 2%, and a WACC of 11.5%. On our target price, the stock would trade at 9.3x FY10E P/CEPS, in-line with other gas utilities, which have more stable and visible earnings growth.

Risks: We assign a Medium Risk rating for PLL based on our quantitative risk-rating system. Upside risks to our target price include: (1) higher utilization or faster commissioning of regassification capacities than assumed by us, (2) better acceptability of higher-priced LNG by the domestic market, and (3) power plans, albeit preliminary, could add value over the medium to long term.

Appendix A-1

Analyst Certification

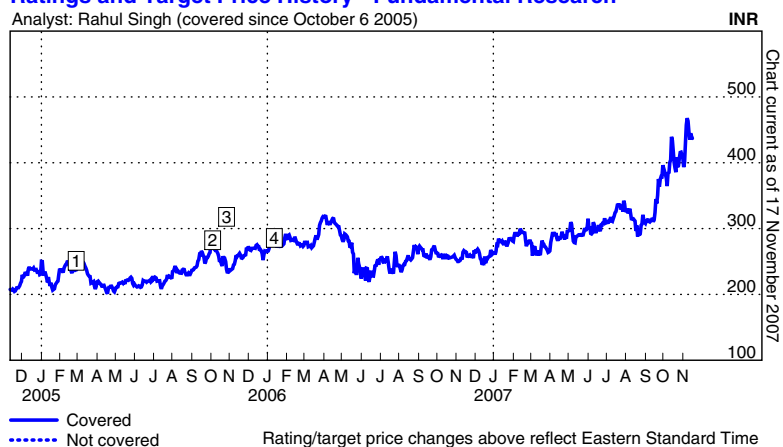
Each research analyst(s), strategist(s) or research associate(s) responsible for the preparation and content of this research report hereby certifies that, with respect to each issuer or security that the research analyst, strategist or research associate covers in this research report, all of the views expressed in this research report accurately reflect their personal views about those issuer(s) or securities. Each research analyst(s) strategist(s) or research associate(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, strategist or research associate in this research report.

IMPORTANT DISCLOSURES

GAIL (GAIL.BO)

Ratings and Target Price History - Fundamental Research

Analyst: Rahul Singh (covered since October 6 2005)



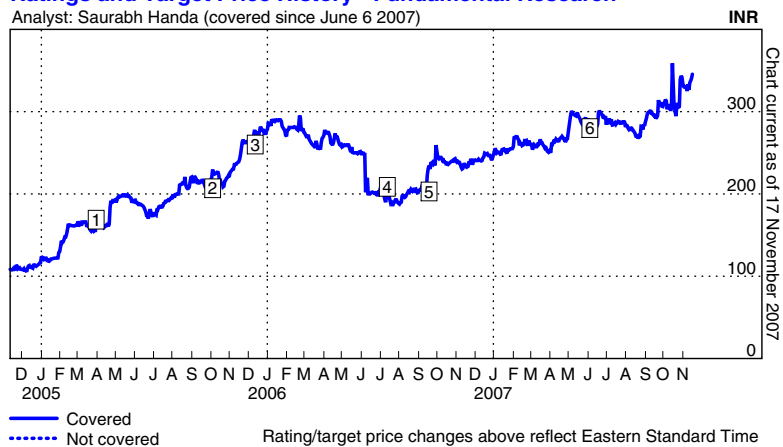
#	Date	Rating	Target Price	Closing Price
1:	28 Feb 05	2H	*275.00	241.00
2:	5 Oct 05	*1L	*329.00	275.95
3:	27 Oct 05	1L	*318.00	237.85
4:	12 Jan 06	1L	*323.00	282.70

*Indicates change.

Gujarat Gas (GGAS.BO)

Ratings and Target Price History - Fundamental Research

Analyst: Saurabh Handa (covered since June 6 2007)



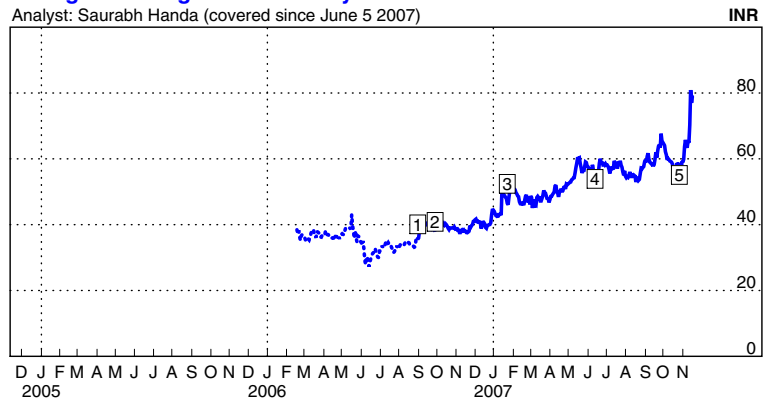
#	Date	Rating	Target Price	Closing Price
1:	31 Mar 05	*2L	*172.00	168.71
2:	5 Oct 05	2L	*230.00	229.67
3:	13 Dec 05	2L	*300.00	276.12
4:	13 Jul 06	*1L	*250.00	198.34
5:	19 Sep 06	1L	*288.00	234.37
6:	5 Jun 07	1L	*350.00	287.75

*Indicates change.

Gujarat State Petronet (GSPT.BO)

Ratings and Target Price History - Fundamental Research

Analyst: Saurabh Handa (covered since June 5 2007)



#	Date	Rating	Target Price	Closing Price
1:	31 Aug 06	1M	49.00	35.55
2:	28 Sep 06	1M	*55.00	38.35
3:	23 Jan 07	1M	*60.00	46.50
4:	13 Jun 07	1M	*72.00	54.80
5:	26 Oct 07	1M	*74.00	57.75

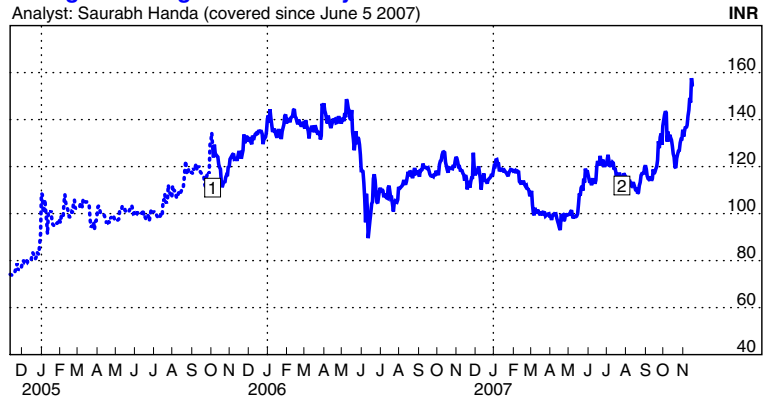
*Indicates change.

Rating/target price changes above reflect Eastern Standard Time

Indraprastha Gas (IGAS.BO)

Ratings and Target Price History - Fundamental Research

Analyst: Saurabh Handa (covered since June 5 2007)



#	Date	Rating	Target Price	Closing Price
1:	5 Oct 05	1L	156.00	128.50
2:	26 Jul 07	1L	*160.00	114.00

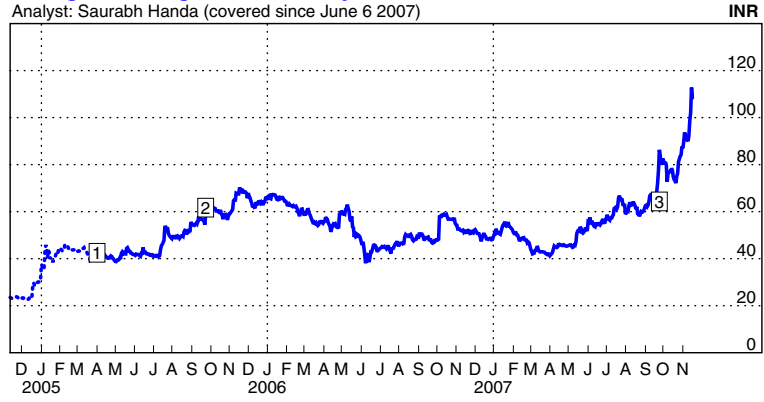
*Indicates change.

Rating/target price changes above reflect Eastern Standard Time

Petronet LNG (PLNG.BO)

Ratings and Target Price History - Fundamental Research

Analyst: Saurabh Handa (covered since June 6 2007)



#	Date	Rating	Target Price	Closing Price
1:	1 Apr 05	2H	49.00	42.05
2:	23 Sep 05	*1M	*74.00	58.75
3:	25 Sep 07	*3M	*78.00	86.30

*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 Indraprastha Gas. This position reflects information available as of the prior business day.

Within the past 12 months, Citigroup Global Markets Inc. or its affiliates has acted as manager or co-manager of an offering of securities of GAIL and Gujarat State Petronet.

Citigroup Global Markets Inc. or its affiliates has received compensation for investment banking services provided within the past 12 months from GAIL.

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from GAIL, Gujarat Gas and Petronet LNG in the past 12 months.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following company(ies) as investment banking client(s): GAIL.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following company(ies) as clients, and the services provided were non-investment-banking, securities-related: GAIL and Gujarat Gas.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following company(ies) as clients, and the services provided were non-investment-banking, non-securities-related: GAIL, Gujarat Gas and Petronet LNG.

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 revenues from, among other business units, the Private Client Division, Institutional Sales and Trading, and Investment Banking.

For important disclosures (including copies of historical disclosures) regarding the companies that are the subject of this Citi Investment Research product ("the Product"), please contact Citi Investment Research, 388 Greenwich Street, 29th 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. Private Client Division clients should refer to www.smithbarney.com/research. 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 Ratings Distribution

Data current as of 30 September 2007

	Buy	Hold	Sell
Citi Investment Research Global Fundamental Coverage (3358)	50%	38%	12%
% of companies in each rating category that are investment banking clients	53%	55%	42%

Guide to Fundamental Research Investment Ratings:

Citi Investment Research'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 Citi Investment Research'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 Corporate Bond Research Credit Opinions and Investment Ratings:

Citi Investment Research'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 CIR 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 Citi Investment Research 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 Citi Investment Research'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 <http://sd.ny.smb.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.

OTHER DISCLOSURES

The subject company's share price set out on the front page of this Product is quoted as at 22 November 2007 03:54 PM on the issuer's primary market.

Citigroup Global Markets Inc. or its affiliates beneficially owns 2% or more of any class of common equity securities of Indraprastha Gas.

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 subject company(ies) 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 does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of Citi Investment Research 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.

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 to wholesale clients through Citigroup Global Markets Australia Pty Ltd. (ABN 64 003 114 832 and AFSL No. 240992) and to retail clients through Citi Smith Barney Pty Ltd. (ABN 19 009 145 555 and AFSL No. 240813), Participants 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 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 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. If the Product was prepared by Citi Investment Research and distributed in Japan by Nikko Citigroup Limited ("NCL"), it is being so distributed under license. If the Product was prepared by NCL and distributed by Nikko Cordial Securities Inc. or Citigroup Global Markets Inc. it is being so distributed under license. NCL 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. In the event that an error is found in an NCL research report, a revised version will be posted on Citi Investment Research'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 Supervisory 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, which is regulated by Comision Nacional Bancaria y de Valores. Reforma 398, Col. Juarez, 06600 Mexico, D.F. In New Zealand the Product is made available through Citigroup Global Markets New Zealand Ltd., 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 Poland by Dom Maklerski Banku Handlowego SA an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Papierów Wartosciowych i Gield. Bank Handlowy w Warszawie S.A. ul. Senatorska 16, 00-923 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 Gasheka 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 Taiwan through Citigroup Global Markets Inc. (Taipei Branch), 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. 8 Manhattan Building, Hsin Yi Road, Section 5, Taipei 100, 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 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 NASD, NYSE 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 Citi Investment Research'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.

This Product is not intended for distribution in Poland. Any receipt or review of the Product in Poland is not authorized by the Firm.

© 2007 Citigroup Global Markets Inc. (© Nikko Citigroup Limited, if this Product was prepared by it). Citi Investment Research is a division and service mark of Citigroup Global Markets Inc. and its affiliates and is used and registered throughout the world. Citigroup and the Umbrella Device are trademarks and service marks of Citigroup or its affiliates and are used and registered throughout the world. Nikko is a registered trademark of Nikko Cordial Corporation. All rights reserved. Any unauthorized use, duplication, redistribution or disclosure is prohibited by law and will result in prosecution. 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
