

INDIA

Petrochemical Industry

5 December 2006

RIL IN Outperform

Stock price as of 04 Dec 06	Rs	1,259.90
12-month target	Rs	1,415.00
Upside/downside	%	+12.3
Valuation	Rs	1,573.00
- Sum of Parts		

GICS sector		energy
Market cap	Rs bn	1,756
Market cap	US\$m	39,484
Number shares on issue	m	1,394

GAIL IN Underperform

Stock price as of 04 Dec 06	Rs	268.05
12-month target	Rs	195.00
Upside/downside	%	-27.3
Valuation	Rs	223.00
- Sum of Parts		

GICS sector		utilities
Market cap	Rs m	226,677
Market cap	US\$m	5,098
Number shares on issue	m	845.7

Recent oil & gas reports

- > Oil & Gas: "Retail price cuts, as expected" – 29 November 2006
- > Cairn India (Not Rated): "Valuation is the key" – 27 November 2006
- > Petronet LNG: "New potential supplies may add 4% to NPV at best" – 27 November 2006
- > ONGC: "DGH acknowledges poor track record" – 23 November 2006
- > Reliance Industries: "Even more gas" – 16 November 2006
- > Reliance Industries: "Jamnagar visit – Plant beyond plants" – 13 November 2006
- > Petrochemical Industry: "Margins drop MoM, increases YoY" – 03 November 2006
- > Reliance Industries: "Stepped up KGD6 production, captured on our valuations" – 02 November 2006

Analysts

Jal Irani		
91 22 6653 3040		jal.irani@macquarie.com
Amit Mishra		
91 22 6653 3051		amit.mishra@macquarie.com
Unmesh Sharma		
91 22 6653 3042		unmesh.sharma@macquarie.com

Higher naphtha prices drag margins

Event

- Reliance announced December 2006 petrochemical prices. Our analysis suggests that Reliance's integrated cracker margin, as well as the polyester margin, declined MoM due to an increase in cost of its key input, naphtha. GAIL's cracker margin was unchanged MoM on back of stable input costs.

Impact

- **Reliance's polymer/cracker (integrated) margin declined by 7% MoM, but rose 21% YoY** (see figure 1). Polymer prices were flat MoM, weighed down by new capacities that came on stream in South Korea, in addition to the crackers that restarted operation after maintenance shutdowns. On the other hand, the cost of primary input, naphtha, increased by ~11% on back of a rebound in crude prices and a rise in demand from South Korea (figure 2).
- **Polyester margin declined for third consecutive month.** Polyester (integrated) margin declined by 17% MoM and 9% YoY (figure 1), on back of marginal decline in product prices and an increase in the naphtha prices. The price of cotton, a substitute product, was flat, impacting polyester chain prices and margins (figure 5). Reliance has shut down one of the paraxylene units at Jamnagar for planned maintenance, which is expected to re-start by the third week of January 2007.
- **GAIL's polymer/cracker margin unchanged MoM, but YoY margin improved 13%**, as product price hikes exceeded the 23% hike in the price of GAIL's primary input, gas, during April 2006 to \$4.75/mmbtu, after which it remained fixed (figures 6 and 7).
- **We forecast a mixed petrochemical outlook.** We expect global capacity increases (primarily in Iran) to lower polymer utilisation rates and margins (figure 3). On the other hand, we believe cotton prices will rise as inventories decline, enhancing polyester margins in the longer term (figure 5).

Outlook

- **Reliance Industries is our top oil and gas sector pick.** A staggering US\$19bn capex and oil finds that are potentially as large as ONGC's reserves should triple earnings over the next five years. This should also result in a consistent rise in ROE, on rising contributions from high-return businesses.
Please refer to our initiation report, "The world is not enough," 10 July 2006.
- **We maintain our Underperform recommendation on GAIL.** The lack of incremental sources of gas limits growth in GAIL's primary-gas transmission business. We expect profit to decline at a 4% CAGR over the next three years. GAIL has a strong balance sheet with a rising net cash balance, though this is also weighing down RoE.
Please refer to our initiation report, "Gassed!" 25 September 2006.

Please refer to the important disclosures on inside back cover of this document, or on our website www.macquarie.com.au/research/disclosures.

Reliance's petrochemical margins decline MoM, GAIL's margin flat

Fig 1 Change in integrated cracker/ polymer and polyester margins

	RIL		GAIL
	Cracker/ polymer	Polyester	Cracker/ HDPE
Month-on-month change	-6.9%	-17.4%	0.0%
Year-on-year change	21.1%	-8.8%	12.8%

Notes: Margin is the difference between the monthly spot product price and the cost of raw materials. Integrated margin is calculated for a particular integrated stream of products.

Source: RIL, Bloomberg, Macquarie Research, December 2006

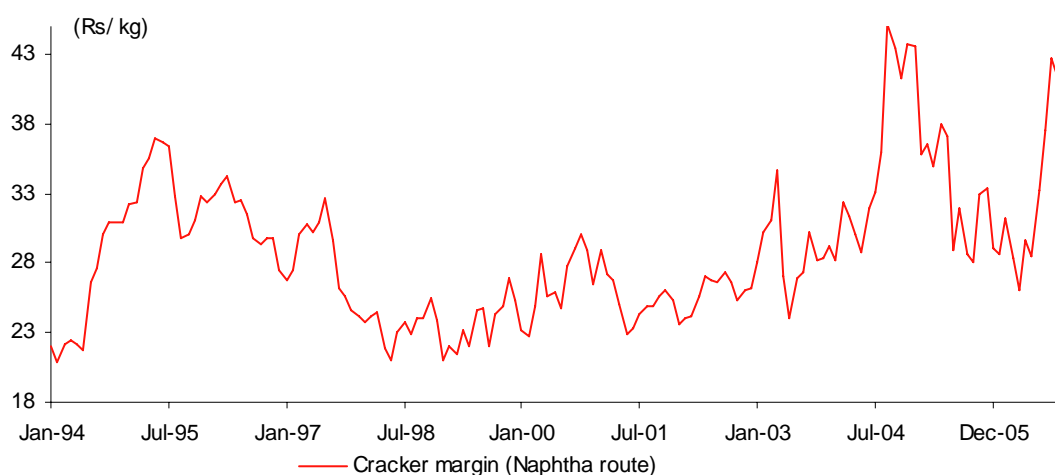
Fig 2 Reliance's key product and feedstock prices

	PTA	MEG	PSF	POY	HDPE	PVC	PP	PET	LAB	Naptha (Input)
Dec-05	43800	44700	65300	64070	55420	38000	57000	65425	69300	24594
Nov-06	45500	41800	67500	67210	65650	47500	64300	70000	77300	25474
Dec-06	44600	42800	67500	67210	65650	41500	64300	70000	77300	28183
M-o-M change	-2.0%	2.4%	0.0%	0.0%	0.0%	-12.6%	0.0%	0.0%	0.0%	10.6%
Y-o-Y change	1.8%	-4.3%	3.4%	4.9%	18.5%	9.2%	12.8%	7.0%	11.5%	14.6%

Source: RIL, Macquarie Research, December 2006

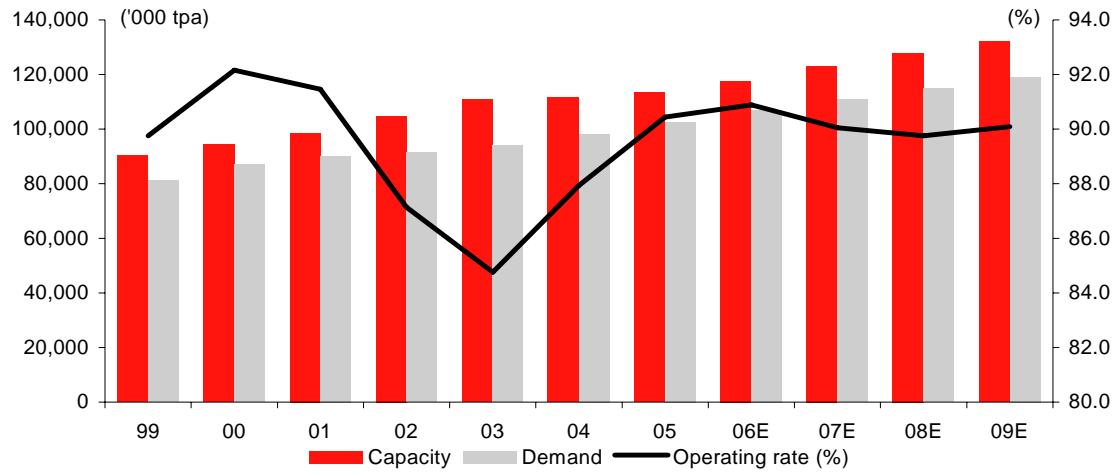
Reliance's polymer (integrated) margins fall by 7% MoM, rise 21% YoY

Fig 3 RIL's polymer/cracker stream integrated* margin



Source: RIL, Bloomberg, Datastream, Macquarie Research, December 2006

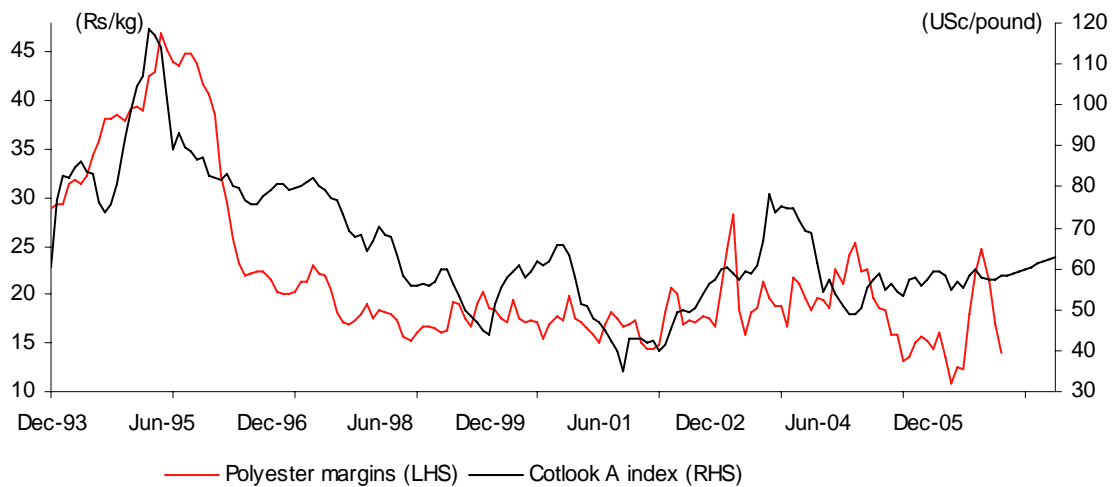
Fig 4 Lower cracker utilisation rates likely to lower polymer margin



Source: Macquarie Research, CMAI, December 2006

Polyester margin declined 17% MoM; higher cotton prices to lift margin

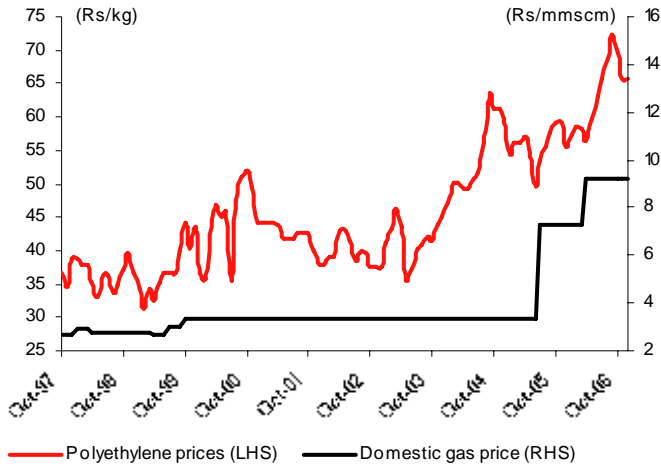
Fig 5 RIL's polyester chain margin and Cotlook A index



Source: RIL, Bloomberg, Macquarie Research, December 2006

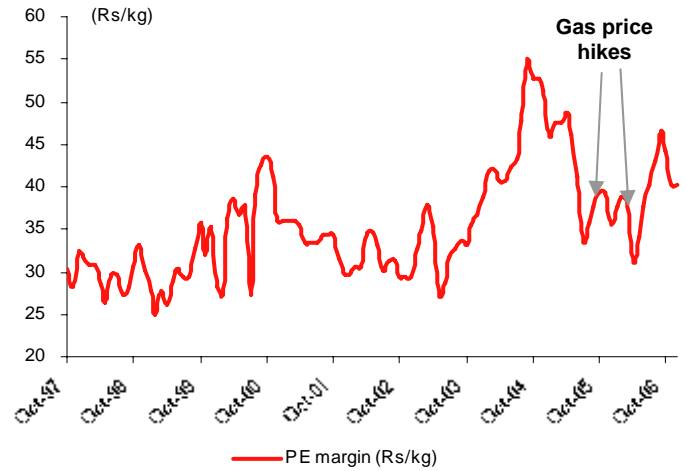
GAIL's polymer margin flat MoM, but grows YoY

Fig 6 GAIL's HDPE (product) and gas (input) prices



Source: RIL, Macquarie Research, December 2006

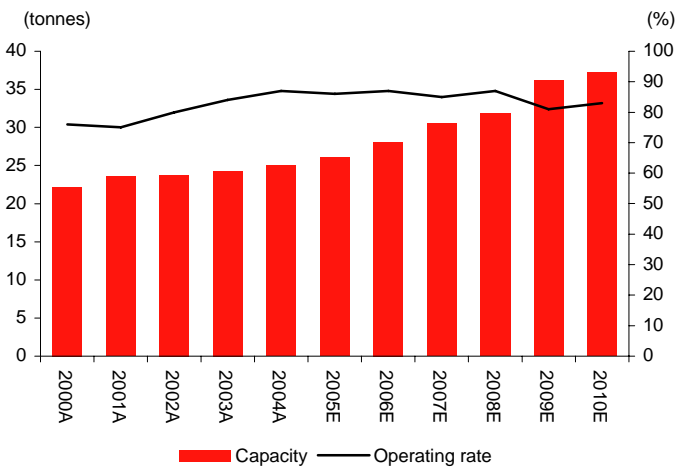
Fig 7 Margins affected by hike in input gas prices



Source: RIL, Macquarie Research, December 2006

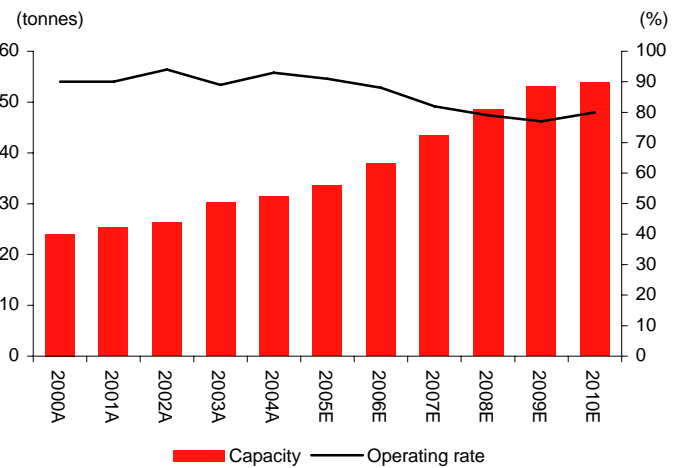
Global polyester outlook – Paraxylene forecast to remain strong, PTA fall

Fig 8 World Paraxylene demand and operating rate



Source: CMAI, Macquarie Research, December 2006

Fig 9 World PTA demand and operating rate



Source: CMAI, Macquarie Research, December 2006

Fig 10 Global oil & gas industry peer group valuation matrix

Company	Country	Market Cap (US\$m)	Price Perf. (1 yr %)	2 yr fwd EPS CAGR (%)	EBIDTA Margin (%)	Current EV/EBIDTA (x)	Current PER (x)	1 yr fwd PER (x)	2 yr fwd PER (x)	P/BV (x)	RoCE (%)	RoE (%)
Integrated										1 year historic		
Hess Corp	USA	14,142	20.2	(1.3)	13.7	5.9	8.1	8.7	8.4	1.8	14.0	20.1
BG group plc	UK	11,666	20.7	2.1	46.9	9.0	12.8	13.6	12.3	3.8	24.0	28.4
BP Plc	UK	56,262	(13.2)	1.4	15.5	6.2	10.2	10.2	9.9	2.7	23.0	28.5
China Petroleum	China	84,020	89.9	13.5	12.7	8.6	16.8	15.3	13.1	3.1	11.9	19.6
Exxon Mobil	USA	450,268	30.7	(2.2)	15.1	7.2	11.9	12.1	12.4	3.9	31.5	33.9
Petrobras	Brazil	98,227	27.1	11.3	34.3	5.0	6.9	6.2	5.6	2.1	24.3	33.6
Petrochina *	China	229,868	61.0	2.1	44.3	5.9	10.6	10.2	10.2	2.9	25.9	27.4
Reliance Industries*	India	39,358	95.2	16.3	17.3	13.5	18.5	16.5	13.7	3.8	14.2	20.6
Royal Dutch Shell	Holland	86,490	-2.3	(2.0)	16.1	4.9	9.3	9.0	9.6	2.2	25.7	28.8
Total SA	France	95,765	(2.7)	4.4	20.6	4.7	10.2	9.4	9.4	2.9	24.9	34.0
Average		120,495	31.8	4.0	22.9	7.0	11.3	10.9	10.4	2.9	21.9	27.4
Exploration & Production												
Anadarko Petroleum	USA	22,482	4.6	0.5	77.7	8.8	7.5	8.5	7.5	1.6	18.7	24.5
Apache Corp	USA	22,911	2.0	(0.9)	75.3	8.5	8.4	9.1	8.5	1.8	22.9	28.2
CNOOC *	China	37,741	26.5	(4.7)	56.9	5.0	8.7	9.3	9.6	2.7	29.7	30.6
Gazprom	Russia	10,576	NA	16.9	41.8	13.8	16.8	14.8	12.3	2.5	10.6	13.3
ONGC*	India	41,100	24.3	9.5	41.8	5.3	7.8	6.6	6.5	2.2	26.4	28.7
Average		26,962	14.4	4.3	58.7	8.3	9.8	9.7	8.9	2.2	21.7	25.1
Refining & Marketing												
Bharat Petroleum*	India	2,752	(22.6)	115.1	1.9	11.8	32.7	13.1	7.1	1.3	5.8	3.9
Formosa	Taiwan	19,236	18.7	6.5	14.9	9.4	11.6	11.0	10.2	2.8	15.1	24.2
Petrochemical*												
Hindustan Petroleum*	India	2,226	(12.3)	120.4	1.5	13.4	28.6	11.0	5.9	0.9	4.3	3.3
Indian Oil Corp	India	11,782	(16.8)	6.6	5.6	8.4	10.7	10.7	9.4	1.7	10.7	17.0
SK Corp*	S Korea	9,350	25.5	0.8	7.6	8.3	6.9	6.9	6.8	1.0	11.0	14.9
S-Oil Corp*	S Korea	8,375	(8.6)	(12.2)	9.3	6.1	10.8	12.5	14.0	2.7	19.9	25.4
Sunoco Inc	USA	8,493	(16.7)	(10.2)	6.6	5.1	7.9	8.9	9.8	4.0	26.3	53.3
Tesoro Petroleum	USA	4,811	22.3	(13.3)	5.7	4.0	6.8	6.7	9.1	2.0	23.2	31.6
Average		11,199	(0.1)	22.6	6.4	8.1	13.6	9.8	8.9	2.0	15.5	22.8
Petrochemicals												
Formosa Chemical & Fibre*	Taiwan	9,121	6.0	16.0	10.8	16.3	9.6	8.5	7.1	1.5	11.9	15.9
Formosa Plastics *	Taiwan	9,568	13.2	5.2	10.9	20.4	11.9	12.7	10.8	1.7	10.8	14.6
Honam Petrochemical *	S Korea	2,301	28.6	(10.4)	14.3	5.6	7.1	8.0	8.8	0.9	13.0	12.7
IPCL	India	1,890	23.0	(14.9)	18.6	4.4	7.0	6.9	9.6	1.4	22.3	29.3
LG Chemicals*	S Korea	2,987	(18.7)	25.8	8.9	5.6	14.4	10.2	9.1	1.2	7.2	8.5
LG Petrochemical *	S Korea	1,148	(15.1)	(2.4)	10.9	4.2	8.7	8.3	9.1	1.2	14.4	14.4
Sinopec Shanghai Petrochem	China	4,667	54.2	5.8	9.1	10.2	21.8	34.5	19.5	2.2	8.5	9.9
Average		4,152	17.7	3.6	10.4	9.5	11.5	12.7	10.6	1.5	9.8	11.8
Gas Distribution												
GAIL*	India	5,081	(0.6)	(2.6)	25.6	5.3	9.1	9.1	9.6	2.2	21.3	24.3
Gujarat Gas	India	346	(9.9)	7.8	19.9	9.3	15.7	16.5	13.5	4.1	27.7	29.2
Hong Kong & China Gas*	HK	12,162	3.1	(21.7)	121.8	11.6	14.0	24.6	22.8	3.8	28.0	27.2
Indraprastha Gas	India	367	(11.6)	20.2	41.1	7.4	15.4	13.2	10.7	4.3	29.2	30.7
Korea Gas *	S Korea	3,524	22.6	4.7	7.8	10.9	15.5	15.2	14.2	1.0	5.0	6.1
Panva Gas	HK	481	2.2	36.1	22.8	10.4	24.0	60.0	12.9	NA	7.8	9.8
Petronas Gas	Myanmar	4,963	0.0	2.2	59.9	10.4	17.4	16.7	16.7	2.5	12.8	14.1
Tokyo Gas	Japan	13,974	15.3	15.2	NA	NA	22.4	17.5	16.9	2.4	5.8	9.1
Transcanada Corp	Canada	16,624	6.6	2.6	50.1	10.6	20.3	20.9	19.3	2.5	9.5	17.6
Xiniao Gas	China	1,152	56.9	22.5	30.1	19.2	26.3	22.7	18.7	3.3	8.9	14.3
Average		5,867	8.4	8.7	42.1	10.6	18.0	21.6	15.5	2.9	15.6	18.3
Cumulative average		38,440	15.1	9.1	25.4	8.6	13.3	13.4	11.1	2.4	16.8	21.1

Source: Macquarie Research, December 2006

Important disclosures:

Recommendation definitions

Macquarie Australia/New Zealand

Outperform – return >5% in excess of benchmark return (>2.5% in excess for listed property trusts)
 Neutral – return within 5% of benchmark return (within 2.5% for listed property trusts)
 Underperform – return >5% below benchmark return (>2.5% below for listed property trusts)

Macquarie Asia

Outperform – expected return >+10%
 Neutral – expected return from -10% to +10%
 Underperform – expected return <-10%

Macquarie First South Securities (South Africa)

Outperform – expected return >+5%
 Neutral – expected return from -5% to +5%
 Underperform – expected return <-5%

Recommendations – 12 months

Note: Quant recommendations may differ from Fundamental Analyst recommendations

Recommendation proportions

	AU/NZ	Asia	RSA
Outperform	42.81%	57.12%	42.20%
Neutral	44.60%	26.36%	46.80%
Underperform	12.59%	16.52%	11.00%

For quarter ending 30 September 2006

Volatility index definition*

This is calculated from the volatility of historic price movements.

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

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

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

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

Low – stock should be expected to move up or down at least 15–25% in a year.

* Applicable to Australian/NZ stocks only

Financial definitions

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

EPS = adjusted net profit / efpowa*

ROA = adjusted ebit / average total assets

ROA Banks/Insurance = adjusted net profit / average total assets

ROE = adjusted net profit / average shareholders funds

Gross cashflow = adjusted net profit + depreciation

*equivalent fully paid ordinary weighted average number of shares

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

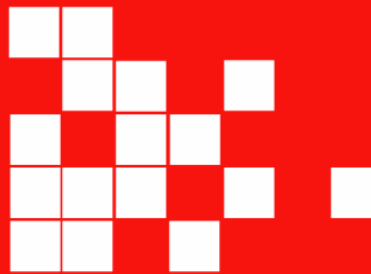
Analyst Certification: The views expressed in this research accurately reflect the personal views of the analyst(s) about the subject securities or issuers and no part of the compensation of the analyst(s) was, is, or will be directly or indirectly related to the inclusion of specific recommendations or views in this research. The analyst principally responsible for the preparation of this research receives compensation based on overall revenues, including investment banking revenues, of Macquarie Bank Ltd ABN 46 008 583 542 (AFSL No.237502)("Macquarie") and its related entities ("the Macquarie group") and has taken reasonable care to achieve and maintain independence and objectivity in making any recommendations.

Disclaimers: Macquarie Securities (Australia) Ltd; Macquarie Europe Ltd; Macquarie Securities (USA) Inc; Macquarie Securities Ltd; Macquarie Securities (Singapore) Pte Ltd; and Macquarie Securities (New Zealand) Ltd are not authorised deposit-taking institutions for the purposes of the Banking Act 1959 (Commonwealth of Australia), and their obligations do not represent deposits or other liabilities of Macquarie. Macquarie provides a guarantee to the Monetary Authority of Singapore in respect of Macquarie Securities (Singapore) Pte Ltd for up to SGD25m under the Securities and Futures Act (Chapter 289). Macquarie does not otherwise guarantee or provide assurance in respect of the obligations of any of the above mentioned entities. This research has been prepared for the general use of the wholesale clients of the Macquarie group and must not be copied, either in whole or in part, or distributed to any other person. If you are not the intended recipient you must not use or disclose the information in this research in any way. Nothing in this research shall be construed as a solicitation to buy or sell any security or product, or to engage in or refrain from engaging in any transaction. In preparing this research, we did not take into account the investment objectives, financial situation and particular needs of the reader. Before making an investment decision on the basis of this research, the reader needs to consider, with or without the assistance of an adviser, whether the advice is appropriate in light of their particular investment needs, objectives and financial circumstances. There are risks involved in securities trading. The price of securities can and does fluctuate, and an individual security may even become valueless. International investors are reminded of the additional risks inherent in international investments, such as currency fluctuations and international stock market or economic conditions, which may adversely affect the value of the investment. This research is based on information obtained from sources believed to be reliable but we do not make any representation or warranty that it is accurate, complete or up to date. We accept no obligation to correct or update the information or opinions in it. Opinions expressed are subject to change without notice. No member of the Macquarie group accepts any liability whatsoever for any direct, indirect, consequential or other loss arising from any use of this research and/or further communication in relation to this research.

Other Disclaimers: Securities research is issued and distributed by Macquarie Securities (Australia) Ltd (AFSL No. 238947) in Australia, a participating organisation of the Australian Stock Exchange; Macquarie Securities (New Zealand) Ltd in New Zealand, a licensed sharebroker and New Zealand Exchange Firm; Macquarie Europe Ltd in the United Kingdom, which is authorised and regulated by the Financial Services Authority (No. 193905); Macquarie Securities Ltd in Hong Kong, which is licensed and regulated by the Securities and Futures Commission; Macquarie Securities (Japan) Limited in Japan, a member of the Tokyo Stock Exchange, Inc. and Osaka Securities Exchange Co., Ltd and in Singapore, Macquarie Securities (Singapore) Pte Ltd (Company Registration Number: 198702912C), a Capital Markets Services licence holder under the Securities and Futures Act to deal in securities and provide custodial services in Singapore. Pursuant to the Financial Advisers (Amendment) Regulations 2005, Macquarie Securities (Singapore) Pte Ltd is exempt from complying with sections 25, 27 and 36 of the Financial Advisers Act. Economic research is issued and distributed in Australia by Macquarie; in New Zealand by Macquarie Securities (New Zealand) Ltd and in the United Kingdom by Macquarie Europe Ltd. Clients should contact analysts at, and execute transactions through, a Macquarie group entity in their home jurisdiction unless governing law permits otherwise. This research may be distributed in the United States only to major institutional investors and may not be circulated to any other person in the United States. Macquarie Securities (USA) Inc., which is a registered broker-dealer and member of the NASD, accepts responsibility for the content of each research report prepared by one of its non-US affiliates when the research report is distributed in the United States by Macquarie Securities (USA) Inc. All transactions by US investors involving securities discussed in this report must be effected through Macquarie Securities (USA) Inc. The information contained in this email is confidential. If you are not the intended recipient, you must not disclose or use the information in this email in any way. If you received it in error, please tell us immediately by return e-mail and delete the document. We do not guarantee the integrity of any e-mails or attached files and are not responsible for any changes made to them by any other person. Disclosures with respect to the issuers, if any, mentioned in this research are available at www.macquarie.com/research/disclosures. © Macquarie Group

Auckland Tel: (649) 377 6433	Bangkok Tel: (662) 694 7999	Hong Kong Tel: (852) 2823 3588	Jakarta Tel: (62 21) 515 1818	Johannesburg Tel: (27 11) 343 2258	Kuala Lumpur Tel: (60 3) 2059 8833
London Tel: (44 20) 7065 2000	Manila Tel: (63 2) 857 0888	Melbourne Tel: (613) 9635 8139	Mumbai Tel: (91 22) 6653 3000	New York Tel: (1 212) 231 2500	Perth Tel: (618) 9224 0888
Seoul Tel: (82 2) 3705 8500	Shanghai Tel: (86 21) 6841 3355	Singapore Tel: (65) 6231 1111	Sydney Tel: (612) 8232 9555	Taipei Tel: (886 2) 2734 7500	Tokyo Tel: (81 3) 3512 7900

Available to clients on the world wide web at www.macquarie.com/research and through Thomson Financial, Reuters and Bloomberg.



Research

Automobiles/Auto Parts

Kurt Sanger (Japan, Asia)	(813) 3512 7859
Peter So (China)	(852) 2823 3586
Liny Halim (Indonesia)	(6221) 515 7343
Toshisuke Hayami (Japan)	(813) 3512 7873
Eunsook Kwak (Korea)	(822) 3705 8644
Francis Eng (Malaysia)	(603) 2059 8986

Banks and Non-Bank Financials

Ismael Pili (Asia, Singapore)	(65) 6231 2840
Nick Lord (China, Hong Kong)	(852) 2823 4774
Christina Fok (China)	(852) 2823 3584
Chris Esson (Hong Kong)	(852) 2823 3567
Seshadri Sen (India)	(9122) 6653 3053
Liny Halim (Indonesia)	(6221) 515 7343
Hideyasu Ban (Japan)	(813) 3512 7858
Kentaro Kogi (Japan)	(813) 3512 7865
Mark Barclay (Korea)	(822) 3705 8658
Young Chung Mok (Korea)	(822) 3705 8668
Hwashin Lee (Korea)	(822) 3705 4994
Chin Seng Tay (Malaysia, S'pore)	(65) 6231 2837
Gilbert Lopez (Philippines)	(632) 857 0898
Chris Hunt (Taiwan)	(8862) 2734 7526
Matthew Smith (Taiwan)	(8862) 2734 7514
Alastair Macdonald (Thailand)	(662) 694 7741

Chemicals/Textiles

Scott Weaver (China, Taiwan)	(8862) 2734 7512
Jal Irani (India)	(9122) 6653 3040
Kitti Nathisuwan (Thailand)	(662) 694 7724

Conglomerates

Peter So (China)	(852) 2823 3586
Gilbert Lopez (Philippines)	(632) 857 0898

Consumer

Ramiz Chelat (Asia)	(852) 2823 3587
Xiaopo Wei (China)	(852) 2823 4741
Unmesh Sharma (India)	(9122) 6653 3042
Sarina Lesmina (Indonesia)	(6221) 515 7339
Duane Sandberg (Japan)	(813) 3512 7867
Christina Lee (Korea)	(822) 3705 8670
Paul Hwang (Korea)	(822) 3705 8678
Woochang Chung (Korea)	(822) 3705 8667
Edward Ong (Malaysia)	(603) 2059 8982
Nadine Javellana (Philippines)	(632) 857 0890
Chris Clayton (Thailand)	(662) 694 7829

Emerging Leaders

PJ King (Asia)	(852) 2823 3566
Paul Quah (Hong Kong)	(852) 2823 4627
Saurabh Jain (India)	(9122) 6653 3046
Oliver Cox (Japan)	(813) 3512 7871
Robert Burghart (Japan)	(813) 3512 7853
Paul Hwang (Korea)	(822) 3705 8678
Woochang Chung (Korea)	(822) 3705 8667
Nadine Javellana (Philippines)	(632) 857 0890
Jeremy Chen (Taiwan)	(8862) 2734 7521
Scott Weaver (Taiwan)	(8862) 2734 7512

Insurance

Chris Esson (China, Taiwan)	(852) 2823 3567
-----------------------------	-----------------

Sales

Regional Heads of Sales

Greg Gordon (Asia)	(852) 2823 3509
Ulrike Pollak-Tsutsumi (Frankfurt)	(49) 69 7593 8747
Daniel Fust (Geneva)	(41) 22 818 7710
Thomas Renz (Geneva)	(41) 22 818 7712
Ajay Bhatia (India)	(9122) 6653 3200
Stuart Smythe (India)	(9122) 6653 3200
Eugene Ha (Korea)	(822) 3705 8643
K.Y. Nam (Korea)	(822) 3705 8607
Derek Wilson (London)(N Asia)	(44) 20 7065 5856
Julien Roux (London)	(44) 20 7065 5887
Lena Yong (Malaysia)	(603) 2059 8888
Ismael Pili (Manila)	(65) 6231 2840
Luke Sullivan (New York)	(1 212) 231 2507
Mark Lawrence (New York)	(1 212) 231 2516
Sheila Schroeder (San Francisco)	(1 415) 835 1235

Media

Ramiz Chelat (Asia)	(852) 2823 3587
Prem Jearajasingam (Malaysia)	(603) 2059 8989

Metals and Mining

Simon Francis (Asia)	(852) 2823 3590
Felix Lam (China, HK, Taiwan)	(852) 2823 3575
Rakesh Arora (India)	(9122) 6653 3054
Adam Worthington (Indonesia)	(6221) 515 7338
Samuel Thawley (Japan)	(813) 3512 7876
Christina Lee (Korea)	(822) 3705 8670

Oil and Gas

David Johnson (Asia)	(852) 2823 4691
Scott Weaver (China, Taiwan)	(8862) 2734 7512
Jal Irani (India)	(9122) 6653 3040
Mark Barclay (Korea)	(822) 3705 8658
Edward Ong (Malaysia)	(603) 2059 8982
Kitti Nathisuwan (Thailand)	(662) 694 7724

Pharmaceuticals

Shubham Majumder (India)	(9122) 6653 3049
--------------------------	------------------

Property

Matt Nacard (Asia)	(852) 2823 4731
Eva Lee (Hong Kong)	(852) 2823 3573
Takashi Sakai (Japan)	(813) 3512 7884
Francis Eng (Malaysia)	(603) 2059 8986
Gilbert Lopez (Philippines)	(632) 857 0898
Tuck Yin Soong (Singapore)	(65) 6231 2838
Monchai Jaturanpinyo (Thailand)	(662) 694 7727

Technology

Suveer Chainani (India)	(9122) 6653 3045
Damian Thong (Japan)	(813) 3512 7877
David Gibson (Japan)	(813) 3512 7880
George Chang (Japan)	(813) 3512 7854
Yoshihiro Shimada (Japan)	(813) 3512 7862
Do Hoon Lee (Korea)	(822) 3705 8641
Michael Bang (Korea)	(822) 3705 8659
Patrick Yau (Singapore)	(65) 6231 2835
Cheryl Hsu (Taiwan)	(8862) 2734 7522
Daniel Chang (Taiwan)	(8862) 2734 7516
Dominic Grant (Taiwan)	(8862) 2734 7528
Jessica Chang (Taiwan)	(8862) 2734 7518
Nicholas Teo (Taiwan)	(8862) 2734 7523
Warren Lau (Taiwan)	(852) 2823 3592

Telecoms

Tim Smart (Asia)	(852) 2823 3565
Jake Lynch (China, Hong Kong)	(852) 2823 3583
Shubham Majumder (India)	(9122) 6653 3049
Richard Moe (Indonesia)	(662) 694 7753
Nathan Ramler (Japan)	(813) 3512 7875
Joel Kim (Korea)	(822) 3705 8677
Prem Jearajasingam (Malaysia)	(603) 2059 8989
Ramakrishna Maruvada (Singapore)	(65) 6231 2842
Dominic Grant (Taiwan)	(8862) 2734 7528
Richard Moe (Thailand)	(662) 694 7753

Regional Heads of Sales cont'd

Giles Heyring (Singapore)	(65) 6231 2888
Mark Duncan (Taiwan)	(8862) 2734 7510
Angus Kent (Thailand)	(662) 694 7601
Dominic Henderson (Tokyo)	(813) 3512 7820
Nick Cant (Tokyo)	(813) 3512 7821
Charles Nelson (UK/Europe)	(44) 20 7065 2032
Rob Fabbro (UK/Europe)	(44) 20 7065 2031

Sales Trading

Anthony Wilson (Asia)	(852) 2823 3511
Mona Lee (Hong Kong)	(852) 2823 3519
Stuart Goddard (Europe)	(44) 20 7065 2033
Vijay Gussain (India)	(9122) 6653 3205
Howard Yoon (Korea)	(822) 3705 8601

Transport & Logistics

Anderson Chow (China, Hong Kong)	(852) 2823 4773
Michael Chan (China)	(852) 2823 3595
Eunsook Kwak (Korea)	(822) 3705 8644

Utilities

Sylvia Chan (Asia)	(852) 2823 3579
Adam Worthington (Indonesia)	(6221) 515 7338
Prem Jearajasingam (Malaysia)	(603) 2059 8989

Commodities

Jim Lennon	(4420) 7065 2014
Adam Rowley	(4420) 7065 2013
Bonnie Liu	(4420) 7065 2014
Henry Liu	(4420) 7065 2014

Data Services

Liz Dinh (Asia)	(852) 2823 4762
Brent Borger (Japan)	(813) 3512 7852

Economics

Roland Randall (Asean)	(852) 2823 3572
Bill Belchere (Asia)	(852) 2823 4636
Richard Gibbs (Australia)	(612) 8232 3935
Paul Cavey (China)	(852) 2823 3570
Daniel McCormack (Int'l)	(812) 8232 2999
Richard Jerram (Japan)	(813) 3512 7855

Quantitative

Martin Emery (Asia)	(852) 2823 3582
Viking Kwok (Asia)	(852) 2823 4735
George Platt (Australia)	(612) 8232 6539

Strategy/Country

Tim Rocks (Asia)	(852) 2823 3585
Desh Peramunetilleke (Asia)	(852) 2823 3564
Jake Lynch (China)	(852) 2823 3583
Jal Irani (India)	(9122) 6653 3040
Peter Eadon-Clarke (Japan)	(813) 3512 7850
Eugene Ha (Korea)	(822) 3705 8643
Uday Jayaram (Malaysia)	(603) 2059 8988
Gilbert Lopez (Philippines)	(632) 857 0898
Tuck Yin Soong (Singapore)	(65) 6231 2838
Chris Hunt (Taiwan)	(8862) 2734 7526
Kitti Nathisuwan (Thailand)	(662) 694 7724

Find our research at

Macquarie:	www.macquarie.com.au/research
Thomson:	www.thomson.com/financial
Reuters:	www.rbr.reuters.com
Bloomberg:	MAC GO
Contact Gareth Warfield for access	(612) 8232 3207

Sales Trading cont'd

Robert Risman (New York)	(1 212) 231 2555
Isaac Huang (Taiwan)	(8862) 2734 7582
Kenichi Ohtaka (Tokyo)	(813) 3512 7830

Index Sales

Margaret Hartmann	(612) 8232 9834
-------------------	-----------------

Alternative Strategies

Convertibles - Roland Sharman	(852) 2823 4628
Depository Receipts - Robert Ansell	(852) 2823 4688
Derivatives - Vipul Shah	(852) 2823 3523
Futures - Tim Smith	(852) 2823 4637
Hedge Fund Sales - Darin Lester	(852) 2823 4736
Structured Products - Andrew Terlich	(852) 2249 3225