Macquarie Research
Equities

MACQUARIE

INDIA

Reliance Industries

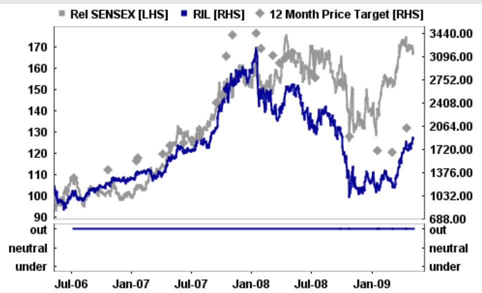
8 May 2009

RIL IN		Outperform
Stock price as of 07 May 09	Rs	1,915.55
12-month target	Rs	2,220.00
Upside/downside	%	+15.9
Valuation	Rs	2,220.00
- Sum of Parts		
GICS sector		energy
Market cap	Rs bn	3,015
30-day avg turnover	US$m	220.0
Market cap	US$m	60,756
Number shares on issue	m	1,574

Investment fundamentals

Year end 31 Mar		2009A	2010E	2011E	2012E
Total revenue	bn	1,492.6	1,641.3	2,147.4	2,288.8
EBITDA	bn	234.3	351.0	403.0	442.1
EBITDA growth	%	1.3	49.8	14.8	9.7
EBIT	bn	183.3	268.2	316.3	351.7
EBIT Growth	%	1.0	46.4	17.9	11.2
Reported profit	bn	152.2	232.8	282.8	331.6
Adjusted profit	bn	155.5	232.8	282.8	331.6
EPS rep	Rs	92.65	141.70	172.18	201.84
EPS adj	Rs	94.65	141.70	172.18	201.84
EPS adj growth	%	0.7	49.7	21.5	17.2
PE adj	x	20.2	13.5	11.1	9.5
Total DPS	Rs	12.60	19.28	23.42	27.46
Total div yield	%	0.7	1.0	1.2	1.4
ROE	%	14.6	17.9	19.6	19.4
EV/EBITDA	x	15.4	10.3	9.0	8.2
Net debt/equity	%	36.5	33.0	15.8	-1.2
Price/book	x	2.5	2.4	2.0	1.7

RIL IN rel SENSEX performance, & rec history



Source: FactSet, Macquarie Research, May 2009
(all figures in INR unless noted)

Analyst

Jal Irani
91 22 6653 3040 jal.irani@macquarie.com
Amit Mishra
91 22 6653 3051 amit.mishra@macquarie.com

Surprising again

Event

- We are upgrading our target price for Reliance Industries (RIL) by 9% to Rs2,220 and reiterate our Outperform recommendation. RIL is restarting selling transportation fuels in domestic markets, which we believe will be more profitable than exports. RIL's SEZ refinery ramp-up is also ahead of forecast.

Impact

- **Rs1.5/l margins make fuel retailing profitable.** Our scenario analysis suggests that it will be value-accretive for a new player to set up a retail outlet at a margin of Rs1.5/litre on petrol and diesel (Fig 4). We view RIL's decision to re-enter the fuel retailing business positively, especially in the current low crude price environment. We value the auto fuel retailing business at Rs88/share.
  - ⇒ **RIL shall enjoy high throughputs and margins.** Initially, RIL will be focusing on the high-margin markets, primarily Gujarat, where it enjoys tax benefits and freight advantage. In the past, RIL had earned Rs1/litre margins premium and 2x throughput of public sector oil marketing companies (OMC) on an all-India basis. In addition, freight-cost saving of US$3/bbl (for example to Europe) is expected to further add Rs 0.8/l retail margin. On aggregate, we estimate an incremental margin of Rs3.5-4.5/l from auto fuel retailing and throughput of 200-350tonnes/month for RIL.
  - ⇒ **Focus on profitability and not on market share.** After entering this business in 2004, RIL had gained a 13% market share from incumbents in two years. This time RIL will be operating only in profitable markets. We have assumed RIL will be operating only 50–60% of its retail outlets.
- **New SEZ refinery ramp-up ahead of expectations.** RIL commissioned one of its two CDUs last quarter and achieved 100% utilisation turning the refinery profitable within the first quarter of start-up. Full start-up is scheduled in the current quarter, including start-up of FCCU converting bottom-of-barrel distillates into high-value propylene and PP. Euro V diesel production has also just started, kicking off its first high-margin product. We are upgrading the valuation of the new refinery by Rs48/share to factor in a faster ramp-up.
- **Higher market price driven valuation upgrades**. We value RIL's other E&P blocks, primarily NEC-25, CBM Sohagpur and KG-D9, based on EV/reserve multiples for its Indian peer, ONGC. The multiple has increased sharply in the last two months due to a rally of ~38% in ONGC stock. We have upgraded the value of these blocks by Rs29/share on the back of this. We have also factored in RIL's current market price to value its treasury stocks higher by Rs20/share.

Earnings and target price revision

- We are upgrading FY3/10E and FY3/11E PAT by 2.1% and 3.8%, respectively, to factor in profits from auto fuel retailing and a faster ramp-up of the new refinery. We are raising our TP to Rs2,220 from Rs2,035.

Price catalyst

- 12-month price target: Rs2,220.00 based on a Sum of Parts methodology.
- Catalyst: New oil & gas finds and enhanced clarity on organised retail.

Action and recommendation

- **RIL is our top sector pick.** We forecast that RIL's PAT will rise 50% YoY in FY3/10, purely from volume growth despite an assumed cyclical downturn.

Fig 1 Stocks mentioned in this report

Company Name	Bloomberg Code	Current Price (Rs/share)	Target Price (Rs/share)	Upside/Downside	Recommendation	Analyst
ONGC	ONGC IN	891	778	-13%	Underperform	Jal Irani
Reliance Industries	RIL IN	1916	2200	16%	Outperform	Jal Irani

Source: Macquarie Research, May 2009

Fig 2 Reliance's auto fuel retail margin estimates

(Rs m)	2010	2011	2012	2013
Existing mothballed retail outlets (no.)	1,432	1,432	1,432	1,432
Assumed re-opened outlets (no.)	750	750	800	860
Throughput/outlet per month (MT)	**200**	**300**	**350**	**350**
Motor spirit (Gasoline)	50	75	88	88
High speed diesel (HSD)	150	225	263	263
Total throughput (m MT)	**1.8**	**2.7**	**3.4**	**3.6**
Motor spirit (Gasoline)	0.5	0.7	0.8	0.9
High speed diesel (HSD)	1.4	2.0	2.5	2.7
Total throughput (mn kilolitres)	**2.2**	**3.3**	**4.1**	**4.4**
Motor spirit (Gasoline)	0.6	0.9	1.1	1.2
High speed diesel (HSD)	1.6	2.4	3.0	3.2
Retail margins (Rs/kl)				
Motor spirit (Gasoline)	3,500	4,000	4,500	4,500
High speed diesel (HSD)	3,500	4,000	4,500	4,500
Weighted average (Gasoline + HSD)	**3,500**	**4,000**	**4,500**	**4,500**
Auto fuel retail margin (Rs m)	**7,760**	**13,303**	**18,624**	**20,021**
Motor spirit (Gasoline)	2,128	3,648	5,107	5,490
High speed diesel (HSD)	5,632	9,655	13,517	14,531

Source: Macquarie Research, May 2009

Fig 3 Snapshot valuations of RIL's auto fuel retailing business

	2008	2009	2010	2011	2012	2013
Cash profit			7,630	13,166	18,480	19,870
Less: Tax			1,154	3,707	5,850	6,934
Cash from operations			**6,476**	**9,460**	**12,630**	**12,936**
Working Capital Investment			-1,194	-95	-385	208
Capex			286	286	286	286
Cash Flows			4,996	9,078	11,959	12,858
PV of Cash Flows			**4,501**	**7,370**	**8,748**	**8,474**
WACC calculation (%)						
Risk-free rate (%)	7.0					
Market risk premium (%)	7.0					
Beta (x)	1.10					
Cost of equity (%)	**14.7**					
Gross cost of debt (%)	11.0					
Tax rate (%)	33.9					
Net cost of debt (%)	**7.3**					
Debt/capital ratio (%)	50.0					
WACC (%)	**11.0%**					
Terminal Growth rate	4%					
DCF calculation						
PV of FCF to FY13E (Rs mn)	37,492					
PV of terminal FCF (Rs mn)	125,043					
Total PV (Rs mn)	162,534					
Less Net Debt (Rs mn)	23,766					
NPV per RIL share (Rs)	**88**					

Source: Macquarie Research, May 2009

Breakeven margin is Rs1.5/litre for both petrol and diesel

Our analysis suggests that a Rs1.5/litre margin for petrol and diesel sales would make setting up a retail outlet viable for a new player. We estimate that, if free pricing were to be allowed, a sustainable margin for incumbents would be Rs1.5/litre. Our key assumptions here are a cost of setting up a retail outlet of Rs15m, gross monthly throughput of 250t and cost of capital of 12.1%.

Fig 4 Rs1.50/litre margin for petrol and diesel makes new retail outlets viable

Key assumptions		**Amount**
Cost of setting up the retail outlet	Rs m	15
Gross throughput per outlet per month	MT	250
Retail margin on Petrol	Rs/litre	1.5
Retail margin on Diesel	Rs/litre	1.5
Operating expense	Rs m	1
Cost of equity	%	15
Cost of debt	%	14
Post-tax cost of debt	%	9
Debt/Capital Financing	%	50
WACC	**%**	**12.1**
Project IRR	**%**	**12.1**

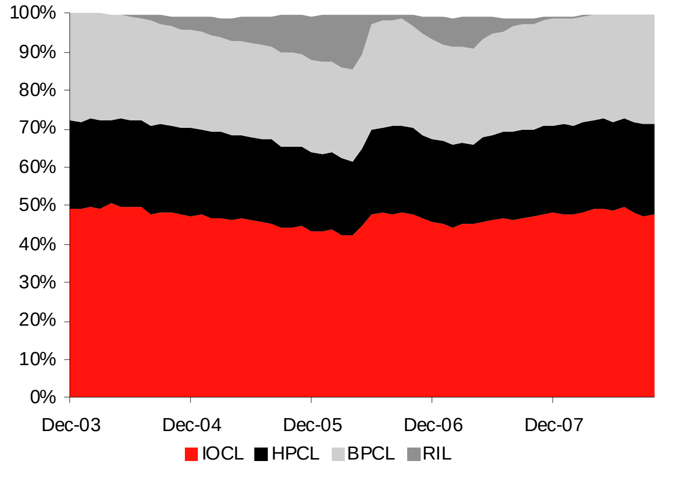
Source: Macquarie Research, May 2009

Fig 5 Change in market share due to RIL's foray into auto fuel retail

	Market share (%)			**Market share change (bps)**	
	Apr-04	**Apr-05**	**Apr-06**	**Over 2-years**	**Over 1-year**
IOC	49.3%	45.6%	41.7%	-760	-370
HPCL	22.4%	22.4%	20.3%	-210	0
BPCL	28.1%	25.6%	24.5%	-360	-250
RIL	0.0%	5.1%	12.9%	1,290	510

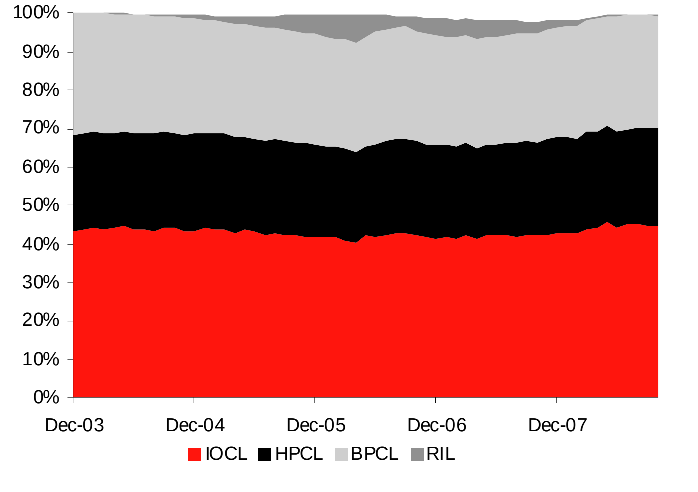
Source: Industry data, Macquarie Research, May 2009

Fig 6 RIL had gained 14% share of diesel market…



Source: Government data, Macquarie Research, May 2009

Fig 7 …and 7% of petrol markets within two years



Source: Macquarie Research, May 2009

Fig 8 Reliance Industries: Segment-wise sum-of-the-parts valuation

	Contribution to value of RIL (Rs m)	Contribution to value of RIL (Rs/share)	Basis for valuation
Core current business			
Refining and Petrochemicals business (existing)	1,474,730	898	DCF based valuation
Auto-fuel retailing	138,768	88	DCF based valuation
Reliance Petroleum refinery & petrochemicals	462,431	282	DCF based valuation
E&P business (KG basin gas)	346,958	211	DCF based valuation
E&P business (KG basin oil)	123,465	75	DCF based valuation
Contribution from main business segments	**2,546,353**	**1,554**	
Other assets and investments			
Treasury stock (13% of equity capital)	424,818	259	Valuation at market price
Contribution from assets and investments	**424,818**	**259**	
Option value: Projects in gestation period			
CBM-Sohagpur and NEC 25 Gas	318,140	194	EV/ boe of reserves as benchmark
Other E&P (D9, D3 and GS-01)	167,400	102	EV/ boe of reserves as benchmark
Organised retail venture	44,660	27	DCF based valuation
2mtpa Ethylene Cracker	139,311	85	DCF based valuation
Total value per share	**3,640,682**	**2,220**	

Source: Macquarie Research, May 2009

Fig 9 Key factors impacting changes in our target price

Assets	Value	Reason
Old Target Price	2,035	
Auto Fuel Retailing Business valuation	88	Re-starting this business
SEZ Refinery	48	Faster than expected ramp-up
Other E&P Assets - D9, NEC-25, CBM	29	Increase in market value of peers
Treasury shares	20	Increase in market value
New Target Price	2,220	

Source: Macquarie Research, May 2009

Reliance Industries (RIL IN, Outperform, Target price: Rs2,220.00)

Profit & Loss		2005A	2006A	2007A	2008A
Revenue	m	**665,977**	**830,248**	**1,137,700**	**1,371,467**
Gross Profit	m	**168,638**	**221,503**	**298,901**	**335,792**
Cost of Goods Sold	m	497,339	608,745	838,800	1,035,674
EBITDA	m	**127,966**	**143,487**	**201,270**	**231,446**
Depreciation	m	37,274	34,949	48,995	50,042
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	m	**90,692**	**108,537**	**152,276**	**181,404**
Net Interest Income	m	-11,048	-4,426	-12,320	-10,865
Associates	m	0	4,747	0	0
Exceptionals	m	306	-995	0	47,335
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	11,305	2,380	6,540	12,235
Pre-Tax Profit	m	**91,255**	**110,243**	**146,496**	**230,108**
Tax Expense	m	-14,972	-16,295	-25,723	-34,876
Net Profit	m	**76,282**	**93,948**	**120,773**	**195,232**
Minority Interests	m	0	0	0	-19
Reported Earnings	m	**76,282**	**93,948**	**120,773**	**195,214**
Adjusted Earnings	m	**75,976**	**94,943**	**120,773**	**147,879**
EPS (rep)		54.72	67.44	83.10	127.73
EPS (adj)		54.50	68.15	83.10	96.80
EPS Growth (adj)	%	47.17	25.05	21.94	16.5
PE (rep)	x	48.29	39.18	31.79	8.9
PE (adj)	x	48.48	38.77	31.79	11.7
Total DPS		8.59	11.42	14.85	10.57
Total Div Yield	%	0.3	0.4	0.6	0.9
Weighted Average Shares	m	1394	1393	1453	1,528
Period End Shares	m	1393	1393	1453	1,573

Profit & Loss		2009A	2010E	2011E	2012E
Revenue	m	**1,492,606**	**1,641,311**	**2,147,447**	**2,288,789**
Gross Profit	m	**345,101**	**430,072**	**491,805**	**533,264**
Cost of Goods Sold	m	1,147,506	1,211,239	1,655,642	1,755,525
EBITDA	m	**234,347**	**350,979**	**402,969**	**442,101**
Depreciation	m	51,069	82,732	86,654	90,402
Amortisation of Goodwill	m	0	0	0	0
Other Amortisation	m	0	0	0	0
EBIT	m	**183,278**	**268,247**	**316,315**	**351,699**
Net Interest Income	m	-17,878	-34,086	-26,023	-13,311
Associates	m	0	0	0	0
Exceptionals	m	-3,280	0	0	0
Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	20,775	22,822	24,218	25,668
Pre-Tax Profit	m	**182,896**	**256,983**	**314,510**	**364,056**
Tax Expense	m	-30,700	-24,218	-31,686	-32,501
Net Profit	m	**152,196**	**232,765**	**282,823**	**331,555**
Minority Interests	m	0	0	0	0
Reported Earnings	m	**152,196**	**232,765**	**282,823**	**331,555**
Adjusted Earnings	m	**155,476**	**232,765**	**282,823**	**331,555**
EPS (rep)		92.65	141.70	172.18	201.84
EPS (adj)		94.65	141.70	172.18	201.84
EPS Growth (adj)	%	0.7	49.7	21.5	17.2
PE (rep)	x	20.7	13.5	11.1	9.5
PE (adj)	x	20.2	13.5	11.1	9.5
Total DPS		12.60	19.28	23.42	27.46
Total Div Yield	%	0.7	1.0	1.2	1.4
Weighted Average Shares	m	1,643	1,643	1,643	1,643
Period End Shares	m	1,643	1,643	1,643	1,643

Profit and Loss Ratios		2009A	2010E	2011E	2012E
Revenue Growth	%	8.8	10.0	30.8	6.6
EBITDA Growth	%	1.3	49.8	14.8	9.7
EBIT Growth	%	1.0	46.4	17.9	11.2
Gross Profit Margin	%	23.1	26.2	22.9	23.3
EBITDA Margin	%	15.7	21.4	18.8	19.3
EBIT Margin	%	12.3	16.3	14.7	15.4
Net Profit Margin	%	10.2	14.2	13.2	14.5
Payout Ratio	%	13.3	13.6	13.6	13.6
EV/EBITDA	x	15.4	10.3	9.0	8.2
EV/EBIT	x	19.7	13.5	11.4	10.3
Balance Sheet Ratios					
ROE	%	14.6	17.9	19.6	19.4
ROA	%	9.5	12.4	13.9	15.0
ROIC	%	11.2	14.0	16.2	17.7
Net Debt/Equity	%	36.5	33.0	15.8	-1.2
Interest Cover	x	10.3	7.9	12.2	26.4
Price/Book	x	2.5	2.4	2.0	1.7
Book Value per Share		775.7	804.6	952.9	1,127.3

Cashflow Analysis		2009A	2010E	2011E	2012E
EBITDA	m	**234,347**	**350,979**	**402,969**	**442,101**
Tax Paid	m	-30,700	-24,218	-31,686	-32,501
Chgs in Working Cap	m	82,253	6,606	-37,496	-9,231
Net Interest Paid	m	-17,878	-34,086	-26,023	-13,311
Other	m	6,462	7,977	9,875	9,406
Operating Cashflow	m	**274,484**	**307,258**	**317,639**	**396,464**
Acquisitions	m	-156,574	0	0	0
Capex	m	-363,487	-81,229	-77,996	-73,420
Asset Sales	m	0	0	0	0
Other	m	20,775	22,822	24,218	25,668
Investing Cashflow	m	**-499,286**	**-58,407**	**-53,778**	**-47,751**
Dividend (Ordinary)	m	-20,699	-31,662	-38,471	-45,100
Equity Raised	m	692	0	0	0
Debt Movements	m	20,782	46,208	-161,194	-298,594
Other	m	246,008	-153,648	-720	0
Financing Cashflow	m	**246,784**	**-139,102**	**-200,385**	**-343,694**
Net Chg in Cash/Debt	m	**21,982**	**109,749**	**63,476**	**5,019**

Balance Sheet		2009A	2010E	2011E	2012E
Cash	m	62,890	137,639	166,115	136,134
Receivables	m	77,131	80,009	102,311	108,083
Inventories	m	123,203	113,575	151,274	154,945
Investments	m	255,636	290,636	325,636	360,636
Fixed Assets	m	1,451,870	1,450,368	1,441,709	1,424,726
Intangibles	m	0	0	0	0
Other Assets	m	155,246	128,184	162,639	166,478
Total Assets	m	**2,125,977**	**2,200,411**	**2,349,684**	**2,351,002**
Payables	m	196,782	171,485	226,253	230,290
Short Term Debt	m	87,000	87,000	87,000	37,000
Long Term Debt	m	440,743	486,951	325,757	77,162
Provisions	m	29,926	29,926	29,926	29,926
Other Liabilities	m	97,370	103,438	115,505	124,925
Total Liabilities	m	**851,821**	**878,801**	**784,441**	**499,304**
Shareholders' Funds	m	1,274,156	1,321,611	1,565,243	1,851,698
Minority Interests	m	0	0	0	0
Other	m	0	0	0	0
Total S/H Equity	m	**1,274,156**	**1,321,611**	**1,565,243**	**1,851,698**
Total Liab & S/H Funds	m	**2,125,977**	**2,200,411**	**2,349,684**	**2,351,002**

All figures in INR unless noted.
Source: Company data, Macquarie Research, May 2009

Important disclosures:

Recommendation definitions

Macquarie - Australia/New Zealand
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

Macquarie – Asia/Europe
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

Macquarie First South - South Africa
Outperform – expected return >+10%
Neutral – expected return from -10% to +10%
Underperform – expected return <-10%

Macquarie - Canada
Outperform – return >5% in excess of benchmark return
Neutral – return within 5% of benchmark return
Underperform – return >5% below benchmark return

Macquarie - USA
Outperform (Buy) – return >5% in excess of benchmark return (Russell 3000)
Neutral (Hold) – return within 5% of benchmark return (Russell 3000)
Underperform (Sell)– return >5% below benchmark return (Russell 3000)

Recommendations – 12 months

Note: Quant recommendations may differ from Fundamental Analyst recommendations

Volatility index definition*

This is calculated from the volatility of historical 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/Canada stocks only

Financial definitions

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

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

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

Recommendation proportions – For quarter ending 31 March 2009

	AU/NZ	Asia	RSA	USA	CA	EUR
Outperform	40.44%	49.55%	44.83%	38.49%	67.19%	43.84%
Neutral	38.60%	15.57%	39.66%	46.43%	28.12%	39.04%
Underperform	20.96%	34.88%	15.52%	15.08%	4.69%	17.12%

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 of Macquarie Group Ltd ABN 94 122 169 279 (AFSL No. 318062)(MGL) 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 Capital (Europe) Ltd; Macquarie Capital Markets Canada Ltd; Macquarie Capital Markets North America Ltd; Macquarie Capital (USA) Inc; Macquarie Capital Securities Ltd; Macquarie Capital Securities (Singapore) Pte Ltd; Macquarie Securities (NZ) Ltd; and Macquarie First South Securities (Pty) Limited 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 Bank Limited ABN 46 008 583 542 (MBL) or MGL. MBL does not guarantee or otherwise provide assurance in respect of the obligations of any of the above mentioned entities. MGL provides a guarantee to the Monetary Authority of Singapore in respect of the obligations and liabilities of Macquarie Capital Securities (Singapore) Pte Ltd for up to SGD 35 million. 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: In Canada, securities research is prepared, approved and distributed by Macquarie Capital Markets Canada Ltd, a participating organisation of the Toronto Stock Exchange, TSX Venture Exchange & Montréal Exchange. Macquarie Capital Markets North America Ltd., which is a registered broker-dealer and member of FINRA, accepts responsibility for the contents of reports issued by Macquarie Capital Markets Canada Ltd in the United States and to US persons and any person wishing to effect transactions in the securities described in the reports issued by Macquarie Capital Markets Canada Ltd should do so with Macquarie Capital Markets North America Ltd. Securities research is issued and distributed by Macquarie Securities (Australia) Ltd (AFSL No. 238947) in Australia, a participating organisation of the Australian Securities Exchange; Macquarie Securities (NZ) Ltd in New Zealand, a licensed sharebroker and New Zealand Exchange Firm; Macquarie Capital (Europe) Ltd in the United Kingdom, which is authorised and regulated by the Financial Services Authority (No. 193905); Macquarie Capital Securities Ltd in Hong Kong, which is licensed and regulated by the Securities and Futures Commission; Macquarie Capital Securities (Japan) Limited in Japan, a member of the Tokyo Stock Exchange, Inc., Osaka Securities Exchange Co. Ltd, and Jasdaq Securities Exchange, Inc. (Financial Instruments Firm, Kanto Financial Bureau(kin-sho) No. 231, a member of Japan securities Dealers Association and Financial Futures Association of Japan); Macquarie First South Securities (Pty) Limited in South Africa, a member of the JSE Limited and in Singapore, Macquarie Capital 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 Capital Securities (Singapore) Pte Ltd is exempt from complying with sections 25, 27 and 36 of the Financial Advisers Act. Clients should contact analysts at, and execute transactions through, a Macquarie Group entity in their home jurisdiction unless governing law permits otherwise. Macquarie Capital (USA) Inc., which is a registered broker-dealer and member of FINRA, accepts responsibility for the content of each research report prepared by one of its non-US affiliates when the research report is distributed in

Auckland Tel: (649) 377 6433	**Bangkok** Tel: (662) 694 7999	**Calgary** Tel: (1 403) 218 6650	**Hong Kong** Tel: (852) 2823 3588	**Jakarta** Tel: (62 21) 515 1818	**Johannesburg** Tel: (2711) 583 2000	**Kuala Lumpur** Tel: (60 3) 2059 8833
London Tel: (44 20) 3037 4400	**Manila** Tel: (63 2) 857 0888	**Melbourne** Tel: (613) 9635 8139	**Montreal** Tel: (1 514) 925 2850	**Mumbai** Tel: (91 22) 6653 3000	**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	**Toronto** Tel: (1 416) 848 3500	**New York** Tel: (1 212) 231 2500

Asia Research

Head of Equity Research

Stephen O'Sullivan	(852) 3922 3566

Automobiles/Auto Parts

Kenneth Yap (Indonesia)	(6221) 515 7343
Clive Wiggins (Japan)	(813) 3512 7856
Dan Lucas (Japan)	(813) 3512 6050
Eunsook Kwak (Korea)	(822) 3705 8644
Linda Huang (Taiwan)	(8862) 2734 7521

Banks and Non-Bank Financials

Ismael Pili (Asia, Japan)	(813) 3512 5979
Nick Lord (Asia, China, Hong Kong)	(852) 3922 4774
Sarah Wu (China)	(8621) 2412 9035
Seshadri Sen (India)	(9122) 6653 3053
Ferry Wong (Indonesia)	(6221) 515 7335
Chin Seng Tay (Malaysia, S'pore)	(65) 6231 2837
Nadine Javellana (Philippines)	(632) 857 0890
Matthew Smith (Taiwan)	(8862) 2734 7514
Alastair Macdonald (Thailand)	(662) 694 7741

Chemicals/Textiles

Jal Irani (India)	(9122) 6653 3040
Christina Lee (Korea)	(822) 3705 8670
Sunaina Dhanuka (Malaysia)	(603) 2059 8993

Conglomerates

Gary Pinge (Asia)	(852) 3922 3557
Leah Jiang (China)	(8621) 2412 9020
Kenneth Yap (Indonesia)	(6221) 515 7343
Ashwin Sanketh (Singapore)	(65) 6231 2830

Consumer

Mohan Singh (Asia)	(852) 3922 1111
Jessie Qian (China, Hong Kong)	(852) 3922 3568
Unmesh Sharma (India)	(9122) 6653 3042
Toby Williams (Japan)	(813) 3512 7392
Heather Kang (Korea)	(822) 3705 8677
HongSuk Na (Korea)	(822) 3705 8678
Edward Ong (Malaysia)	(603) 2059 8982
Alex Pomento (Philippines)	(632) 857 0899
Linda Huang (Taiwan)	(8862) 2734 7521

Emerging Leaders

Jake Lynch (Asia)	(8621) 2412 9007
Minoru Tayama (Japan)	(813) 3512 6058
Robert Burghart (Japan)	(813) 3512 7853
Heather Kang (Korea)	(822) 3705 8677

Industrials

Inderjeetsingh Bhatia (India)	(9122) 6653 3166
Christopher Cintavey (Japan)	(813) 3512 7432
Janet Lewis (Japan)	(813) 3512 7475
Michael Na (Korea)	(822) 2095 7222
Sunaina Dhanuka (Malaysia)	(603) 2059 8993
David Gambrill (Thailand)	(662) 694 7753

Insurance

Mark Kellock (Asia)	(852) 3922 3567
Seshadri Sen (Asia, India)	(9122) 6653 3053
Makarim Salman (Japan)	(813) 3512 7421

Media

Jessie Qian (China, Hong Kong)	(852) 3922 3568
Shubham Majumder (India)	(9122) 6653 3049
Prem Jearajasingam (Malaysia)	(603) 2059 8989
Alex Pomento (Philippines)	(632) 857 0899

Oil and Gas

David Johnson (Asia, China)	(852) 3922 4691
Jal Irani (India)	(9122) 6653 3040
Polina Diyachkina (Japan)	(813) 3512 7886
Christina Lee (Korea)	(822) 3705 8670
Edward Ong (Malaysia)	(603) 2059 8982
Sunaina Dhanuka (Malaysia)	(603) 2059 8993
Ashwin Sanketh (Singapore)	(65) 6231 2830

Pharmaceuticals

Abhishek Singhal (India)	(9122) 6653 3052
Naomi Kumagai (Japan)	(813) 3512 7474
Christina Lee (Korea)	(822) 3705 8670

Property

Matt Nacard (Asia)	(852) 3922 4731
Eva Lee (China, Hong Kong)	(852) 3922 3573
Chris Cheng (China, Hong Kong)	(852) 3922 3581
Unmesh Sharma (India)	(9122) 6653 3042
Chang Han Joo (Japan)	(813) 3512 7885
Hiroshi Okubo (Japan)	(813) 3512 7433
Tuck Yin Soong (Singapore)	(65) 6231 2838
Elaine Cheong (Singapore)	(65) 6231 2839
Corinne Jian (Taiwan)	(8862) 2734 7522
Patti Tomaitrichitr (Thailand)	(662) 694 7727

Resources / Metals and Mining

Andrew Dale (Asia)	(852) 3922 3587
Xiao Li (China)	(852) 3922 4626
YeeMan Chin (China)	(852) 3922 3562
Rakesh Arora (India)	(9122) 6653 3054
Adam Worthington (Indonesia)	(6221) 515 7338
Polina Diyachkina (Japan)	(813) 3512 7886
Christina Lee (Korea)	(822) 3705 8670

Technology

Warren Lau (Asia)	(852) 3922 3592
Dohoon Lee (Hong Kong)	(852) 3922 1119
Patrick Yau (Hong Kong)	(852) 3922 1264
Damian Thong (Japan)	(813) 3512 7877
David Gibson (Japan)	(813) 3512 7880
George Chang (Japan)	(813) 3512 7854
Yukihiro Goto (Japan)	(813) 3512 5984
Michael Bang (Korea)	(822) 3705 8659
Chia-Lin Lu (Taiwan)	(8862) 2734 7526
Daniel Chang (Taiwan)	(8862) 2734 7516
James Chiu (Taiwan)	(8862) 2734 7517
Nicholas Teo (Taiwan)	(8862) 2734 7523

Telecoms

Tim Smart (Asia, China)	(852) 3922 3565
Bin Liu (China)	(852) 3922 3634
Shubham Majumder (India)	(9122) 6653 3049
Kenneth Yap (Indonesia)	(6221) 515 7343
Nathan Ramler (Japan)	(813) 3512 7875
Prem Jearajasingam (Malaysia)	(603) 2059 8989
Ramakrishna Maruvada (Philippines, Singapore, Thailand)	(65) 6231 2842

Transport & Infrastructure

Gary Pinge (Asia)	(852) 3922 3557
Anderson Chow (Asia, China)	(852) 3922 4773
Jonathan Windham (Asia, China)	(852) 3922 5417
Wei Sim (China, Hong Kong)	(852) 3922 3598
Janet Lewis (Japan)	(813) 3512 7475
Eunsook Kwak (Korea)	(822) 3705 8644
Heather Kang (Korea)	(822) 3705 8677
Sunaina Dhanuka (Malaysia)	(603) 2059 8993

Utilities

Carol Cao (China, Hong Kong)	(852) 3922 4075
Adam Worthington (Indonesia)	(6221) 515 7338
Kakutoshi Ohori (Japan)	(813) 3512 7296
Prem Jearajasingam (Malaysia)	(603) 2059 8989
Alex Pomento (Philippines)	(632) 857 0899

Commodities

Jim Lennon	(4420) 3037 4271
Adam Rowley	(4420) 3037 4272
Max Layton	(4420) 3037 4273
Bonnie Liu	(8621) 2412 9008
Henry Liu	(8621) 2412 9005
Rakesh Arora	(9122) 6653 3054

Data Services

Andrea Clohessy (Asia)	(852) 3922 4076

Economics

Bill Belchere (Asia)	(852) 3922 4636
Rajeev Malik (ASEAN, India)	(65) 6231 2841
Richard Gibbs (Australia)	(612) 8232 3935
Paul Cavey (China)	(852) 3922 3570
Richard Jerram (Japan)	(813) 3512 7855

Quantitative

Martin Emery (Asia)	(852) 3922 3582
Viking Kwok (Asia)	(852) 3922 4735
George Platt (Australia)	(612) 8232 6539
Tsumugi Akiba (Japan)	(813) 3512 7560

Strategy/Country

Tim Rocks (Asia)	(852) 3922 3585
Daniel McCormack (Asia)	(852) 3922 4073
Desh Peramunetilleke (Asia)	(852)3922 3564
Mahesh Kedia (Asia)	(852) 3922 3576
Michael Kurtz (China)	(8621) 2412 9002
Seshadri Sen (India)	(9122) 6653 3053
Ferry Wong (Indonesia)	(6221) 515 7335
Chris Hunt (Japan)	(813) 3512 7878
Peter Eadon-Clarke (Japan)	(813) 3512 7850
Prem Jearajasingam (Malaysia)	(603) 2059 8989
Edward Ong (Malaysia)	(603) 2059 8982
Alex Pomento (Philippines)	(632) 857 0899
Tuck Yin Soong (ASEAN, Singapore)	(65) 6231 2838
Daniel Chang (Taiwan)	(8862) 2734 7516
Alastair Macdonald (Thailand)	(662) 694 7741

Find our research at

Macquarie:	www.macquarie.com.au/research
Thomson:	www.thomson.com/financial
Reuters:	www.knowledge.reuters.com
Bloomberg:	MAC GO
Factset:	http://www.factset.com/home.aspx

Email macresearch@macquarie.com for access

Sales

Regional Heads of Sales

Peter Slater (Boston)	(1 617) 598 2502
Thomas Renz (Geneva)	(41) 22 818 7712
Ajay Bhatia (India)	(9122) 6653 3200
Stuart Smythe (India)	(9122) 6653 3200
Gino C Rojas (Philippines)	(632) 857 0761
Greg Norton-Kidd (New York)	(1 212) 231 2527
Luke Sullivan (New York)	(1 212) 231 2507
Scot Mackie (New York)	(1 212) 231 2848
Sheila Schroeder (San Francisco)	(1 415) 835 1235
Giles Heyring (ASEAN)	(65) 6231 2888
Angus Kent (Thailand)	(662) 694 7601

Regional Heads of Sales cont'd

Michael Newman (Tokyo)	(813) 3512 7920
Charles Nelson (UK/Europe)	(44) 20 3037 4832
Rob Fabbro (UK/Europe)	(44) 20 3037 4865
Nick Ainsworth (Generalist)	(852) 3922 2010

Sales Trading

Adam Zaki (Asia)	(852) 3922 2002
Mona Lee (Hong Kong)	(852) 3922 2085
Mike Keen (Europe)	(44) 20 3037 4905
Brendan Rake (India)	(9122) 6653 3204
Edward Robinson (London)	(44) 20 3037 4902

Sales Trading cont'd

Robert Risman (New York)	(1 212) 231 2555
Isaac Huang (Taiwan)	(8862) 2734 7582
Jon Omori (Tokyo)	(813) 3512 7838

Alternative Strategies

Convertibles - Roland Sharman	(852) 3922 2095
Depository Receipts - Robert Ansell	(852)3922 2094
Derivatives - Wayne Edelist	(852) 3922 2134
Futures - Tim Smith	(852) 3922 2113
Structured Products - Andrew Terlich	(852) 3922 2013