Macquarie
Equities Research

The Global Infrastructure Specialist

Indian mid-cap construction

Look beyond near-term spoilers

INDIA

Nagarjuna Construction
NJCC IN, OP, Rs158, 24% upside

NJCC-Rs197 target price

Segment	Rs/share	Comment
Construction business	159	15x FY11E
Overseas construction biz	8	6x FY11E
Investments	30	At book value
Total	**197**	

Source: FactSet, Macquarie Research, December 2009

IVRCL Infrastructure
IVRC IN, OP, Rs343, 40% upside

IVRCL - Rs481 target price

Segment	Per share value	Comment
IVRCL core construction biz	375	15x FY11E
IVR Prime	93	10% disc to market value
Hindustan Dorr Oliver	17	10% disc to market value
Less: Accumulated taxes	4	
Total	**453**	

Source: FactSet, Macquarie Research, December 2009

Patel Engineering
PEC IN, OP, Rs453, 13% upside

PEC - Rs513 target price

	Rs/share	Comment
Core business	429	12x FY11E
Real estate	73	0.8x NAV of Phase I
BOT	16	1x inv equity
Less:accumulated taxes	5	Cash impact of withdrawal of 80IA benefits
Total	**513**	

Source: FactSet, Macquarie Research, December 2009

Inderjeetsingh Bhatia
91 22 6653 3166 inderjeet.bhatia@macquarie.com
Somesh Agarwal
91 22 6653 3064 somesh.agarwal@macquarie.com

21 December 2009

Event

- We spoke to managements of various mid-cap construction companies to discuss key issues. We are very positive on the space and believe the recent underperformance is an excellent accumulation opportunity. We think valuations are at very attractive levels of 10–11x FY11E earnings with a very strong order inflow cycle about to begin. The stocks have come under pressure due to short-term issues like the Dubai credit crisis and statehood demand for Telangana.

Impact

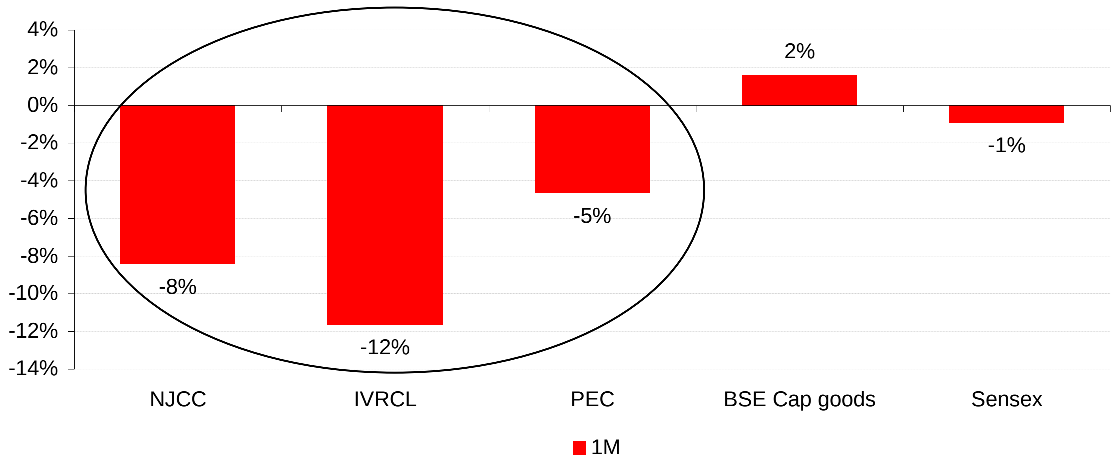
- **Valuations extremely attractive with substantial growth:** The mid-cap construction space has underperformed the broader indices recently and is trading around 10x FY11E (adjusted for subs valuations) due to short-term irritants, despite we believe substantial growth opportunities beginning in FY11. Interestingly, most of these companies have recently raised equity financing, so the risk of dilution is also substantially reduced in the near term.
- **Near-term sentiment spoilers are temporary in nature:** The issues like the Dubai credit crisis and a separate statehood issue in Telangana have created a dampener on stock prices. We strongly believe that these issues are temporary with no material impact and create an opportunity to accumulate these stocks.
- **Substantial structural opportunity to support long-term earnings growth:** We expect order inflow in the infra space to strongly rebound in FY11 as governments get their acts together on sectors like roads, ports and continued push in power. In the near term, top-line growth will likely rebound in FY11. Roads, which were around 30% of order backlog, have reduced to close to 10–15%. Roads itself are likely to witness order inflow of US$10bn in FY11. Even without roads, the order backlog for the space remains healthy at 3x last year's revenues.
- **Lower interest costs can provide upside to earnings estimates:** Interest costs have reduced by 150–200bps for construction companies in 2H FY10, which have yet to be reflected in earnings. Recent fundraising will further help in lowering interest costs, which are not built into consensus estimates.
- **Subsidiary valuations are becoming material:** For all the three companies, BOT (Build-Operate-Transfer) assets are getting commissioned gradually, which will start contributing to earnings while new BOT assets are being added to the portfolio, hence enhancing the size and valuations. Also, we believe valuations for all these companies' real estate portfolios have bottomed out and present upside to the valuations.

Outlook

- **All three stocks seem attractively placed for the short and medium term:** We like all the three companies at current valuations with near-term triggers in place. NJCC and PEC have near-term triggers in the form of Q3 FY10 earnings, while in the case of IVRCL, visibility on BOT revenues and the settling down of the Telangana issue will likely be the triggers.

All 3 stocks at cheap levels post strong underperformance in last 1 month

Fig 1 All 3 stocks have substantially underperformed the broader market and BSE cap goods index in the past 1 month



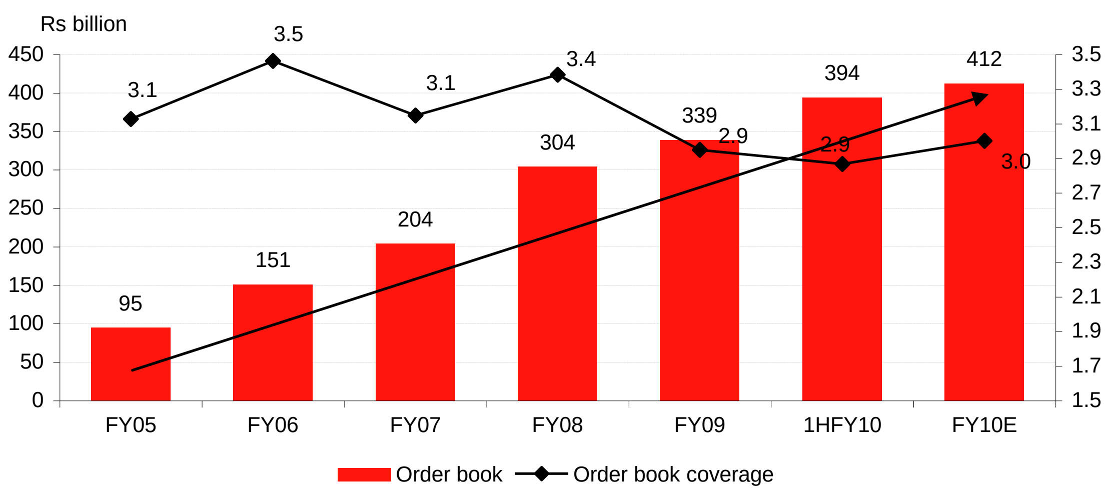
Source: FactSet, Macquarie Research, December 2009

Fig 2 All 3 stocks at very attractive valuations now on FY11E earnings

	Ticker	Macq	Market Cap	Avg. Vol. (20D)	Current price	Target	Upside	P / E		P / BV		PAT CAGR	ROE
		Rating	US$ Bn	US$ m	17-Dec-09	Price	%	10e	11e	10e	11e	09-11e	10e
IVRCL	IVRC IN	OP	1.0	18.9	343.1	481	40%	13.2	10.3	1.6	1.4	17%	11.8%
Nagarjuna Const	NJCC IN	OP	0.9	6.9	158.4	197	24%	14.9	11.4	1.4	1.2	26%	9.1%
Patel Engr	PEC IN	OP	0.6	1.7	452.7	513	13%	14.3	10.3	1.6	1.4	9%	11.3%

Source: FactSet, Macquarie Research, December 2009

Fig 3 Combined order book of the 3 companies has grown substantially over the years



Source: Company data, Macquarie Research, December 2009

NJCC – Top pick in the mid-cap construction space

- **Execution concerns have been addressed:** The two slow-moving road projects (Meerut-Muzaffarnagar BOT road project and Orai-Bhognipur annuity road project, UP) that have adversely affected the top line and margins in the recent past are close to having construction completed by March 2010. Cost overruns from these two projects have all been accounted for in FY09. Management expects to start collecting toll revenues before end-FY10.
- **Funding issues have been resolved in the recent past:** Through QIP of US$75m and Rs1bn raised by the sale in the Gautami power plant to GVK (GVKP IN, Rs46, OP, TP: Rs54, OP, 17.4% upside), NJCC has addressed its funding problems and has room to add leverage to fund further growth. There is upside to our FY10 earnings estimate (Rs2.1bn PAT) given that we have taken interest expense at Rs1.3bn for FY10, while it could come in around Rs1.0-1.1bn given the extra cash available in the 2nd half of FY10.
- **Strong ahead-of-guidance order inflows indicate a robust FY11 in the offing:** Order inflows have been extremely robust in FY10 YTD at Rs63bn vs Rs54bn in the whole of FY09. Management expects at least Rs75bn of orders this year. Management has reiterated its 15% revenue growth guidance for this year and restoring margins back to 10% levels. We expect FY11 to be an extremely robust year on the back of strong order inflows this year with revenue growth of 27% and earnings growth of 39% for NJCC.
- **Near-term spoilers to be taken care of:** NJCC's stock has come under pressure in the past few weeks in the wake of the Dubai real estate issue and the Telangana issue in Andhra Pradesh. However, our talks with the management indicate that these issues have been adequately addressed and concerns should subside.
  - ⇒ **Shortfall in Dubai real estate project to be addressed:** NJCC has spent Rs3.3bn on the project out of which Rs1.8bn has been recovered already in the form of pre-sales. Another bulk receipt of Rs1.8bn will arrive when the 10th floor on the tower is constructed (4 floors done yet). The company is looking to arrange the funding gap from banks in the meanwhile.
  - ⇒ **Telangana issue has had no impact:** Exposure to Andhra Pradesh (AP) is limited at 7% of the order book (Rs140bn). Our talks with the management indicate that there have been no manpower days lost because of the Telangana issue.

IVRCL – Robust growth with effective strategy working in its favour

- **Robust 30–35% revenue growth guidance for FY10:** Despite moderate revenue growth of 11% in 1H FY10, management has stood by its strong guidance given that the first half's revenue booking was hampered by slow execution in the Andhra Pradesh (AP) projects due to elections and were also on a very high base of 1H FY09 (+51% YoY vs 1HFY08). Few of the Andhra Pradesh projects, which were re-mobilised due to elections, will start contributing to revenues from 3Q onwards and also IVRCL was L1 on a few large projects in Maharashtra this quarter, which will also contribute to revenues in 2H FY10. We remain comfortable with our FY10 revenue growth estimate of 30%.
- **Order book and pipeline remain extremely robust:** IVRCL's order book stands at Rs150bn at the end of 1H FY10, implying a strong order book coverage of around 3x. Also, the company is the lowest bidder in a further Rs44bn of new orders. The company is also looking to aggressively participate in the road sector with awards likely by the end of FY10. Moreover, the irrigation sector continues to be the prime focus for provincial governments and order inflow is likely to pick up from states other than AP.
- **Balance sheet provides room for growth:** IVRCL's net debt / equity ratio is at 0.7x. Given that there is room to add leverage and there are no investment requirements toward the current BOT/real estate projects, funding availability is not a concern for new projects.
- **Restructuring seems to be working out in its favour:** IVRCL's recent transfer of its BOT portfolio to IVR Prime (IVR IN, Not rated) in lieu of 59.5m new shares of IVR Prime (taking stake up to 80.5% from 62.4% earlier) seems to be working well given that the company has started bagging more BOT projects. IVR Prime is set to get awarded three new road projects in addition to the four transferred from IVRCL. Except for the upside in valuations that IVRCL got from transferring its BOT projects in a listed company, the rationale was to utilize IVR Prime's balance sheet strength to bid for large projects and to build an in-house source of strong order inflows.

PEC – Improved outlook and funding to boost growth

- **Robust top-line growth and margin expansion this year:** The company expects 20–25% of robust revenue growth in FY10 and has delivered 25% growth in 1H FY10. Strong growth so far has been aided by a robust Rs2bn contribution from US subsidiaries (16% of total revenues reported). In terms of EBITDA margins, the company has surprised one and all with an extremely robust 17.5% margins in 1H FY10. However, this has been due to the execution of high-margin hydropower orders (56%) and higher margin US orders (20% margins). The company expects 16.0–16.2% margins for the full year versus 15.8% reported last year.
- **Order inflow outlook remains robust on irrigation and the kick-start in hydropower:** PEC has a very healthy Rs99bn order book (+51% YoY). The outlook for order inflows remains robust as state governments focus on irrigation and increased order inflow is expected from hydropower post the recent IPO of NHPC (NHPC IN, Not rated). PEC is also the lowest bidder in Rs30bn of projects.
  - ⇒ **Order book mix is shifting gradually towards irrigation and water segment orders:** The order book mix has shifted significantly towards irrigation and water supply segment this year due to a few large orders in this segment (43% now vs 17% in FY08 and 25% in FY07). We expect the contribution of irrigation to the order book will continue to increase further in the short term (to 50% levels in our view from the current 43%) as state governments focus on irrigation.
- **Leverage levels comfortable post QIP:** Post its QIP of Rs3.4bn in October 2009 (dilution of 12.1%), net debt / equity has fallen to 0.7x vs 1.0x earlier. This has provided room on the balance sheet to fund incremental growth and also provides for annual working capital and capex requirements of around Rs6bn.
- **Remain positive on improved outlook and comfort on balance sheet:** We remain positive on the stock given a robust order book, which will likely lead to strong top-line growth in our view. We also view the recent fundraising positively as it provides room for future growth. The stock is trading at 10.3x FY11E earnings, an attractive entry point in our view.

Fig 4 NJCC – Standalone financials (Rs m)

Income Statement	FY08	FY09	FY10E	FY11E	FY12E
Net Revenues	**34,729**	**41,514**	**46,906**	**59,696**	**72,445**
……growth	21%	20%	13%	27%	21%
Total Expenses	31,131	37,777	42,028	53,727	65,201
Core EBITDA	**3,598**	**3,737**	**4,878**	**5,970**	**7,245**
……margin	10.4%	9.0%	10.4%	10.0%	10.0%
Other Income	56	42	94	228	117
Depreciation & amortization	482	533	556	672	826
Net financial cost	719	964	1,299	1,438	1,657
Pre-tax income	2,452	2,282	3,117	4,088	4,879
Taxes	833	743	1,044	1,369	1,634
Extraordinary Items					
Net Income	**1,620**	**1,539**	**2,072**	**2,718**	**3,244**
……margin	4.7%	3.7%	4.4%	4.6%	4.5%
EPS	7.1	6.7	8.1	10.6	12.6

Balance Sheet	FY08	FY09	FY10E	FY11E	FY12E
Cash	2,330	1,345	5,706	2,928	850
Accounts Receivable	8,677	10,260	11,593	14,754	17,905
Inventories	5,493	7,495	8,469	10,778	13,080
Other Assets ST	14,984	14,514	16,395	20,858	25,306
LT Investments	5,648	7,402	7,881	7,881	7,881
Fixed Assets	5,339	4,873	5,317	6,145	7,320
TOTAL ASSETS	**42,471**	**45,891**	**55,360**	**63,344**	**72,341**
Accounts payable	10,735	10,880	12,293	15,645	18,986
Other Liabilities ST	2,078	867	979	1,247	1,513
Financing LT	13,767	17,101	19,101	21,101	23,601
Other Liabilities LT	167	188	188	188	188
SHAREHOLDERS' EQUITY	15,724	16,856	22,800	25,164	28,054
TOTAL LIABILITIES & EQUITY	**42,471**	**45,891**	**55,360**	**63,344**	**72,341**

Source: Company reports, Macquarie Research, December 2009

Fig 5 IVRCL – Standalone financials (Rs m)

Income Statement	FY08	FY09	FY10E	FY11E	FY12E
Net Revenues	**36,606**	**48,819**	**60,000**	**72,000**	**88,011**
……growth	59%	33%	23%	20%	22%
Total Expenses	32,992	44,601	54,300	65,016	79,474
Core EBITDA	**3,614**	**4,218**	**5,700**	**6,984**	**8,537**
……margin	9.9%	8.6%	9.5%	9.7%	9.7%
Other Income	45	299	100	100	100
Depreciation & amortization	328	473	736	803	869
Net financial cost	478	1,306	1,486	1,678	1,918
Pre-tax income	2,853	2,738	3,578	4,603	5,849
Taxes	749	478	1,181	1,519	1,930
Extraordinary Items	-	-	-	-	-
Net Income	**2,105**	**2,260**	**2,397**	**3,084**	**3,919**
……margin	5.7%	4.6%	4.0%	4.3%	4.5%
EPS	15.8	16.9	18.0	23.1	29.4

Balance Sheet	FY08	FY09	FY10E	FY11E	FY12E
Cash	1,772	1,009	2,329	2,594	3,289
Accounts Receivable	6,585	11,430	14,142	16,889	19,584
Inventories	1,943	2,093	2,711	3,237	3,754
Other Assets ST	18,531	23,603	29,987	35,811	41,525
LT Investments	3,409	3,892	4,392	4,892	5,392
Fixed Assets	3,733	5,402	5,133	5,733	6,333
TOTAL ASSETS	**35,973**	**47,430**	**58,695**	**69,156**	**79,877**
Accounts payable	8,893	14,787	20,330	24,278	28,152
Other Liabilities ST	238	440	416	497	576
Financing LT	10,678	13,980	17,480	20,980	23,980
Other Liabilities LT	103	117	117	117	117
SHAREHOLDERS' EQUITY	16,060	18,106	20,351	23,284	27,051
TOTAL LIABILITIES & EQUITY	**35,973**	**47,430**	**58,695**	**69,156**	**79,877**

Source: Company reports, Macquarie Research, December 2009

Fig 6 PEC – Consolidated financials (Rs m)

Income Statement	FY08	FY09	FY10E	FY11E	FY12E
Net Revenues	**18,596**	**24,598**	**30,528**	**38,072**	**46,590**
……growth	42%	32%	24%	25%	22%
Total Expenses	15,856	20,702	25,644	31,981	39,136
Core EBITDA	**2,740**	**3,897**	**4,884**	**6,092**	**7,454**
……margin	14.7%	15.8%	16.0%	16.0%	16.0%
Other Income	37	145	400	444	623
Depreciation & amortization	627	1,196	1,248	1,279	1,605
Net financial cost	295	475	1,225	1,385	1,785
Pre-tax income	1,855	2,370	2,812	3,871	4,687
Taxes	227	436	928	1,277	1,547
Extraordinary Items	-	-	-	-	-
Net Income	**1,519**	**1,805**	**1,722**	**2,392**	**2,888**
EPS	25.5	30.3	25.8	35.8	43.2
		4.1	4.9	3.5	2.9

Balance Sheet	FY08	FY09	FY10E	FY11E	FY12E
Cash	2,882	2,951	5,072	6,027	9,542
Accounts Receivable	4,617	5,826	7,527	9,388	11,488
Inventories	8,148	11,100	13,776	16,689	20,423
LT Investments	361	505	1,005	1,005	1,005
Fixed Assets	6,702	5,701	5,953	5,674	5,069
TOTAL ASSETS	**27,446**	**34,918**	**43,538**	**51,364**	**62,792**
Accounts payable	6,465	6,837	8,782	10,952	13,403
Other Liabilities ST	23	78	78	78	78
Financing LT	9,764	12,813	15,313	17,313	22,313
Minority interest	405	216	377	579	831
SHAREHOLDERS' EQUITY	8,459	10,172	15,177	17,344	19,962
TOTAL LIABILITIES & EQUITY	**27,446**	**34,918**	**43,538**	**51,364**	**62,792**

Source: Company reports, Macquarie Research, December 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 Russell 3000 index return
Neutral (Hold) – return within 5% of Russell 3000 index return
Underperform (Sell)– return >5% below Russell 3000 index return

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 30 September 2009

	AU/NZ	Asia	RSA	USA	CA	EUR	
Outperform	45.08%	54.02%	40.00%	42.31%	62.86%	43.61%	(for US coverage by MCUSA, 0.35% of stocks covered are investment banking clients)
Neutral	39.77%	19.10%	45.00%	43.36%	31.90%	39.85%	(for US coverage by MCUSA, 0.35% of stocks covered are investment banking clients)
Underperform	15.15%	26.88%	15.00%	14.34%	5.24%	16.54%	(for US coverage by MCUSA, 0.00% of stocks covered are investment banking clients)

Company Specific Disclosures:

Important disclosure information regarding the subject companies covered in this report is available at www.macquarie.com/research/disclosures.

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.

General 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 authorized 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. 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. MGL has established and implemented a conflicts policy at group level (which may be revised and updated from time to time) (the "Conflicts Policy") pursuant to regulatory requirements (including the FSA Rules) which sets out how we must seek to identify and manage all material conflicts of interest. 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 your investment objectives, financial situation or particular needs. Before making an investment decision on the basis of this research, you need to consider, with or without the assistance of an adviser, whether the advice is appropriate in light of your 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. Clients should contact analysts at, and execute transactions through, a Macquarie Group entity in their home jurisdiction unless governing law permits otherwise.

Country-Specific Disclaimers:
Australia: In Australia, research is issued and distributed by Macquarie Securities (Australia) Ltd (AFSL No. 238947), a participating organisation of the Australian Securities Exchange. **New Zealand**: In New Zealand, research is issued and distributed by Macquarie Securities (NZ) Ltd, a NZX Firm. **Canada**: In Canada, 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 sent to US persons. 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. The Research Distribution Policy of Macquarie Capital Markets Canada Ltd is to allow all clients that are entitled to have equal access to our research. **United Kingdom**: In the United Kingdom, research is issued and distributed by Macquarie Capital (Europe) Ltd, which is authorised and regulated by the Financial Services Authority (No. 193905). **Hong Kong**: In Hong Kong, research is issued and distributed by Macquarie Capital Securities Ltd, which is licensed and regulated by the Securities and Futures Commission. **Japan**: In Japan, research is issued and distributed by Macquarie Capital Securities (Japan) Limited, 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). **South Africa**: In South Africa, research is issued and distributed by Macquarie First South Securities (Pty) Limited, a member of the JSE Limited. **Singapore**: In Singapore, research is issued and distributed by Macquarie Capital Securities (Singapore) Pte Ltd (Company Registration Number: 198702912C), a Capital Markets Services license

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

Macquarie
Equities Research

MACQUARIE

Asia Research

Head of Equity Research

John O'Connell (Global Co – Head)	(612) 8232 7544
David Rickards (Global Co – Head)	(44 20) 3037 4399
Chris Hunt (Asia – Head)	(852) 3922 1119
Tim Smart (Asia – Deputy Head)	(852) 3922 3565

Automobiles/Auto Parts

Leah Jiang (China)	(8621) 2412 9020
Clive Wiggins (Japan)	(813) 3512 7856
Dan Lucas (Japan)	(813) 3512 6050
ES Kwak (Korea)	(822) 3705 8644
Linda Huang (Taiwan)	(8862) 2734 7521

Banks and Non-Bank Financials

Ismael Pili (Asia)	(813) 3512 5979
Nick Lord (Asia)	(852) 3922 4774
Sarah Wu (China)	(852) 3922 4068
Jemmy Huang (Hong Kong, Taiwan)	(8862) 2734 7530
Ferry Wong (Indonesia)	(6221) 515 7335
Chan Hwang (Korea)	(822) 3705 8643
Michael Na (Korea)	(822) 2095 7222
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

Christina Lee (Hong Kong)	(852) 3922 3571
Jal Irani (India)	(9122) 6653 3040
Shawn Park (Korea)	(822) 3705 8669
Sunaina Dhanuka (Malaysia)	(603) 2059 8993

Conglomerates

Gary Pinge (Asia)	(852) 3922 3557
Leah Jiang (China)	(8621) 2412 9020

Consumer

Mohan Singh (Asia)	(852) 3922 1111
Jessie Qian (China, Hong Kong)	(852) 3922 3568
Toby Williams (Japan)	(813) 3512 7392
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

Industrials

Inderjeetsingh Bhatia (India)	(9122) 6653 3166
Christopher Cintavey (Japan)	(813) 3512 7432
Janet Lewis (Japan)	(813) 3512 7475
Chang Han Joo (Korea)	(822) 3705 8511
Sunaina Dhanuka (Malaysia)	(603) 2059 8993
David Gambrill (Thailand)	(662) 694 7753

Insurance

Mark Kellock (Asia)	(852) 3922 3567
Makarim Salman (Japan)	(813) 3512 7421

Media

Jessie Qian (China, Hong Kong)	(852) 3922 3568
Shubham Majumder (India)	(9122) 6653 3049
George Hogan (Japan)	(813) 3512 7851
Prem Jearajasingam (Malaysia)	(603) 2059 8989
Alex Pomento (Philippines)	(632) 857 0899

Oil and Gas

Laban Yu (Asia)	(852) 3922 4691
Christina Lee (Hong Kong)	(852) 3922 3571
Jal Irani (India)	(9122) 6653 3040
Polina Diyachkina (Japan)	(813) 3512 7886
Shawn Park (Korea)	(822) 3705 8669
Edward Ong (Malaysia)	(603) 2059 8982
Sunaina Dhanuka (Malaysia)	(603) 2059 8993
Linda Huang (Taiwan)	(8862) 2734 7521
Trevor Buchinski (Thailand)	(662) 694 7829

Pharmaceuticals

Christina Lee (Hong Kong)	(852) 3922 3571
Abhishek Singhal (India)	(9122) 6653 3052
Naomi Kumagai (Japan)	(813) 3512 7474

Property

Matt Nacard (Asia)	(852) 3922 4731
Eva Lee (China, Hong Kong)	(852) 3922 3573
Chris Cheng (China, Hong Kong)	(852) 3922 3581
Hiroshi Okubo (Japan)	(813) 3512 7433
Chang Han Joo (Korea)	(822) 3705 8511
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
Christina Lee (Hong Kong)	(852) 3922 3571
Rakesh Arora (India)	(9122) 6653 3054
Adam Worthington (Indonesia)	(65) 6231 2981
Riaz Hyder (Indonesia)	(6221) 2598 8486
Polina Diyachkina (Japan)	(813) 3512 7886

Technology

Michael Bang (Asia)	(822) 3705 8659
Patrick Yau (Hong Kong)	(852) 3922 1264
Zona Chen (Hong Kong)	(852) 3922 3578
Damian Thong (Japan)	(813) 3512 7877
David Gibson (Japan)	(813) 3512 7880
George Chang (Japan)	(813) 3512 7854
Michiko Kakiya (Japan)	(813) 3512 7868
Yukihiro Goto (Japan)	(813) 3512 5984
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

Shubham Majumder (Asia)	(9122) 6653 3049
Ramakrishna Maruvada (ASEAN)	(65) 6231 2842
Bin Liu (China)	(852) 3922 3634
Tim Smart (China)	(852) 3922 3565
Riaz Hyder (Indonesia)	(6221) 2598 8486
Nathan Ramler (Japan)	(813) 3512 7875
Prem Jearajasingam (Malaysia)	(603) 2059 8989

Transport & Infrastructure

Anderson Chow (Asia)	(852) 3922 4773
Jonathan Windham (Asia)	(852) 3922 5417
Wei Sim (China, Hong Kong)	(852) 3922 3598
Janet Lewis (Japan)	(813) 3512 7475
Chang Han Joo (Korea)	(822) 3705 8511
ES Kwak (Korea)	(822) 3705 8644
Sunaina Dhanuka (Malaysia)	(603) 2059 8993

Utilities

Adam Worthington (Asia)	(65) 6231 2981
Carol Cao (China, Hong Kong)	(852) 3922 4075
Jeff Evans (India)	(9122) 3356 3053
Prem Jearajasingam (Malaysia)	(603) 2059 8989
Alex Pomento (Philippines)	(632) 857 0899

Commodities

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

Data Services

Andrea Clohessy (Asia)	(852) 3922 4076
Eric Yeung	(852) 3922 4077

Economics

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

Quantitative

Martin Emery (Asia)	(852) 3922 3582
Viking Kwok (Asia)	(852) 3922 4735
George Platt (Australia)	(612) 8232 6539
Patrick Hansen (Japan)	(813) 3512 7876

Strategy/Country

Michael Kurtz (Asia)	(8621) 2412 9002
Daniel McCormack (Asia)	(852) 3922 4073
Mark Matthews (Asia)	(852) 3922 3585
Matt Nacard (Hong Kong)	(852) 3922 4731
Jal Irani (India)	(9122) 6653 3040
Ferry Wong (Indonesia)	(6221) 515 7335
David Gibson (Japan)	(813) 3512 7880
Peter Eadon-Clarke (Japan)	(813) 3512 7850
Chan Hwang (Korea)	(822) 3705 8643
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
CapitalIQ	www.capitaliq.com
TheMarkets.com	www.themarkets.com

Email macresearch@macquarie.com for access

Sales

Regional Heads of Sales

Chris Gray (ASEAN)	(65) 6231 2888
Justin Crawford (Asia)	(852) 3922 2065
Peter Slater (Boston)	(1 617) 598 2502
Thomas Renz (Geneva)	(41) 22 818 7712
Andrew Mouat (India)	(9122) 6653 3200
Stanley Dunda (Indonesia)	(6221) 515 1555
Kenneth Yap (Indonesia)	(6221) 515 1555
JJ Kim (Korea)	(822) 3705 8799
Jason Lee (Malaysia)	(603) 2059 8888
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

Regional Heads of Sales cont'd

Angus Kent (Thailand)	(662) 694 7601
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
Mike Keen (Europe)	(44) 20 3037 4905
Yat Quan Tan (Hong Kong)	(852) 3922 2028
Stanley Dunda (Indonesia)	(6221) 515 1555
Michael Santos (Philippines)	(632) 857 0813
Dominic Shore (Thailand)	(662) 694 7707

Sales Trading cont'd

Mario Argyrides (Korea)	(822) 3705 8610
Edward Robinson (London)	(44) 20 3037 4902
Matthew Ryan (Singapore)	(65) 6231 2888
Isaac Huang (Taiwan)	(8862) 2734 7582
Phil Sellaroli (Tokyo)	(813) 3512 7837

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