

## INDIA

# Aban Offshore

4 March 2008

### ABAN IN Outperform

Stock price as of 03 Mar 08	Rs	3,836.00
12-month target	Rs	6,000.00
Upside/downside	%	+56.4
Valuation	Rs	6,000.00
- DCF (WACC 10.6%)		

GICS sector		energy
Market cap	Rs m	144,989
30-day avg turnover	US\$m	15.6
Market cap	US\$m	3,632
Number shares on issue	m	37.80

### Investment fundamentals

Year end 31 Mar		2007A	2008E	2009E	2010E
Total revenue	m	7,187	27,857	52,152	64,635
EBITDA	m	3,474	16,338	31,014	38,975
EBITDA growth	%	23.9	370.3	89.8	25.7
EBIT	m	2,146	12,278	25,972	32,574
EBIT Growth	%	24.3	472.2	111.5	25.4
Reported profit	m	-140	4,743	16,893	23,413
Adjusted profit	m	-299	4,584	16,735	23,254
EPS rep	Rs	-3.79	122.96	438.01	607.06
EPS adj	Rs	-8.09	118.85	433.90	602.94
EPS adj growth	%	nmf	nmf	265.1	39.0
PE adj	x	nmf	32.3	8.8	6.4
Total DPS	Rs	3.51	9.84	35.04	48.56
Total div yield	%	0.1	0.3	0.9	1.3
ROE	%	-6.2	47.5	77.2	58.1
EV/EBITDA	x	69.3	15.8	8.4	6.7
Net debt/equity	%	1,794.6	809.1	331.1	143.2
Price/book	x	26.7	10.6	5.0	2.9

### ABAN IN rel SENSEX performance, & rec history



Source: Datastream, Macquarie Research, March 2008 (all figures in INR unless noted)

### Analyst

**Jal Irani**  
91 22 6653 3040 [jal.irani@macquarie.com](mailto:jal.irani@macquarie.com)

**Amit Mishra**  
91 22 6653 3051 [amit.mishra@macquarie.com](mailto:amit.mishra@macquarie.com)

## High debt: Opportunity outweighs risk

### Event

- Aban leveraged its equity 18x in FY3/07 to nearly triple its fleet by buying Sinvest ASA. Investors consider its large debt of US\$2.2bn to be high risk and a depressant on valuations. We see it as an opportunity because we estimate Aban will generate substantial free cashflow (pre-debt payments) of US\$1.6bn, reducing leverage to 0.6x by FY3/11. Moreover, nearly half its cashflows are firm as it recently locked in half its fleet at ~3.0x earlier rates on 2–3 year contracts.

### Impact

- Debt-equity ratio may fall to 0.6x by FY3/11.** Aban could generate robust cashflows after it adds six rigs to its existing fleet of 15 and fully starts operations in the next eight months. In addition, Aban has contracted most of its rigs at high day rates for three years. Hence, there is limited downside risk to our cashflow expectations for the next three years. We expect Aban's FY3/07 debt-to-equity ratio of 18x to improve to 8.0x in FY3/08 and to 0.6x by FY3/11.
- Comfortable and rising solvency and liquidity ratios.** We expect Aban's debt servicing capacity ratio to improve from -0.2x in FY3/07 to 2.0x in FY3/08 and to a healthy 6.3x in FY3/11. Similarly, we forecast interest coverage to rise from an estimated 1.6x in FY3/08 to 4.8x in FY3/11. The current ratio could increase from 1.3x forecast for FY3/08 to 2.1x in FY3/11.
- Aban's FY3/09E PAT changes ±6% for ±100bp change in cost of debt.** Interest payment is Aban's largest expense, at an estimated 16% of sales in FY3/09. Aban has mobilised debt at lower interest rates through long-term service contracts for its rigs. We estimate Aban's weighted average cost of debt at 7.0% and average tenure at more than five years. Although we do not anticipate a de-rating of Aban's debt, the effect of a 100bp rise in interest rates should be 6% on FY3/09E PAT.
- Aban's domestic exposure shields it from global demand variations.** Of Aban's 15 operating rigs, eight are in India, two in the Middle East, one in Africa and four in other Asian countries. We expect Aban to be the key beneficiary of a surge in drilling activities in India. There should be a sharp rise in drilling activity in India as E&P companies move into the second and third phases of their committed exploration.

### Earnings revision

- No change.

### Price catalyst

- 12-month price target: Rs6,000.00 based on a DCF methodology.
- Catalyst: Asset acquisitions and new contracts for the rigs at high day rates.

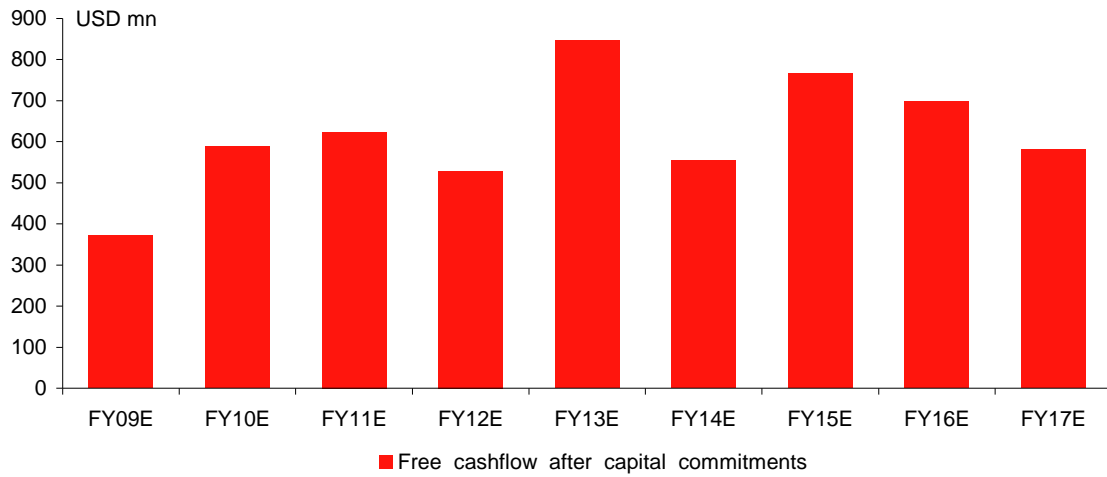
### Action and recommendation

- DCF based target price provides +56% potential. Reaffirm Outperform.**
  - ⇒ **Aban is poised for 10x growth in EBIT** over the next three years as it adds six new rigs and re-prices eight existing rigs at higher day rates in the next eight months.
  - ⇒ **Aban trades at a 32% discount** to its global peers at 6.4x FY3/10E PER. It also has the most competitive cost structure among its peers.

Please refer to the important disclosures and analyst certification on inside back cover of this document, or on our website [www.macquarie.com.au/research/disclosures](http://www.macquarie.com.au/research/disclosures).

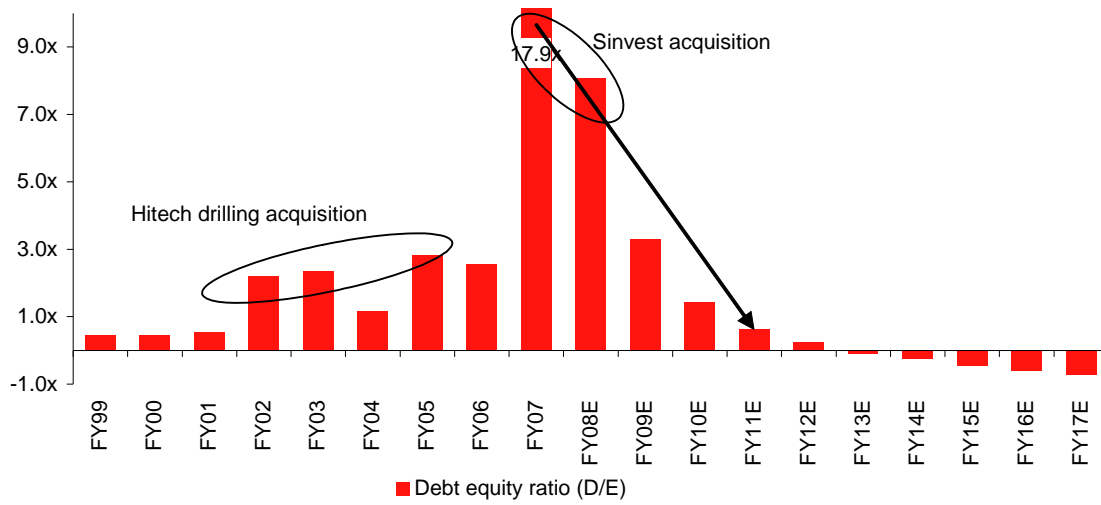
### Debt-equity ratio could fall to 0.6x by FY3/11

**Fig 1 We forecast a US\$1.6bn of free cashflow (pre-debt repayment) by FY3/11**



Source: Macquarie Research, March 2008

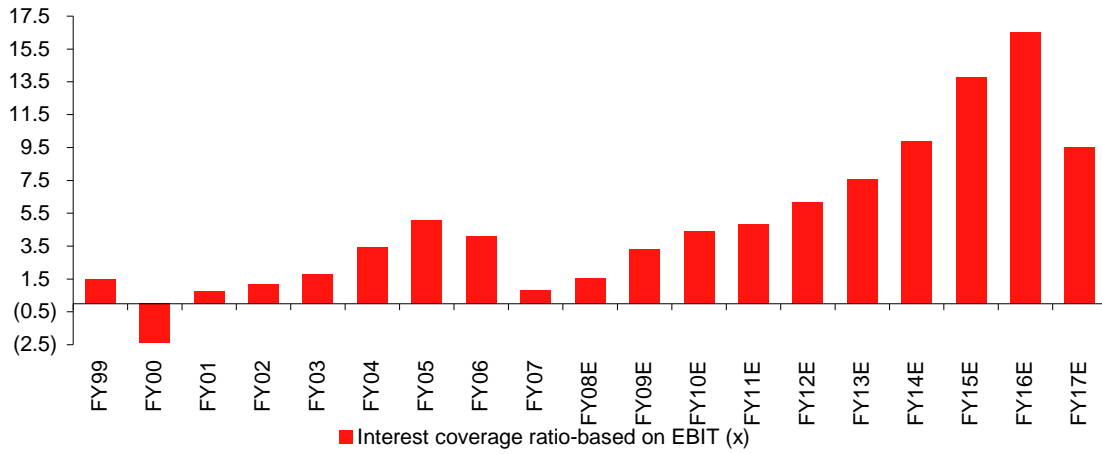
**Fig 2 Robust cashflows should lower debt-equity ratio to 0.6x by FY3/11**



Source: Macquarie Research, March 2008

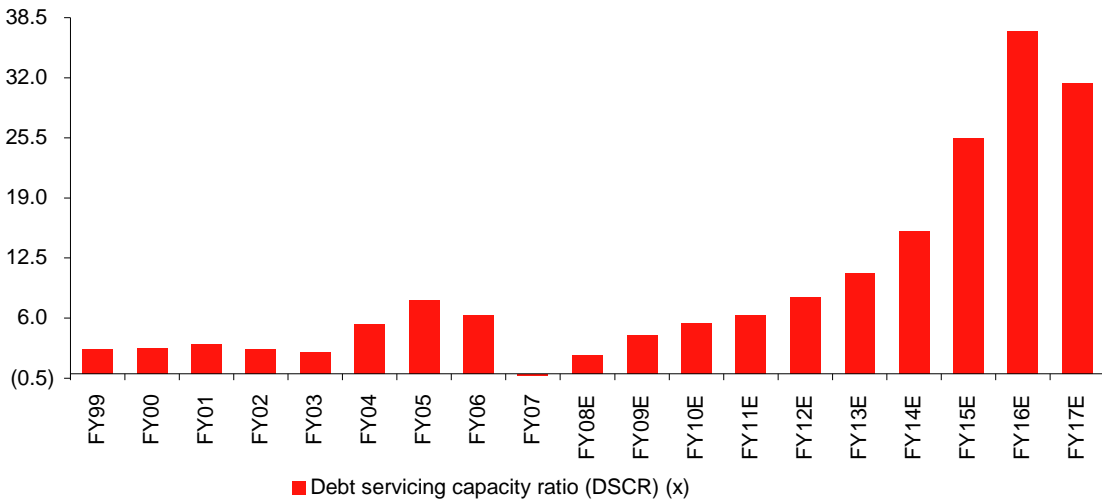
### Comfortable and rising solvency and liquidity ratios

**Fig 3 Aban’s interest coverage ratio could steadily increase to 4.8x in FY3/11**

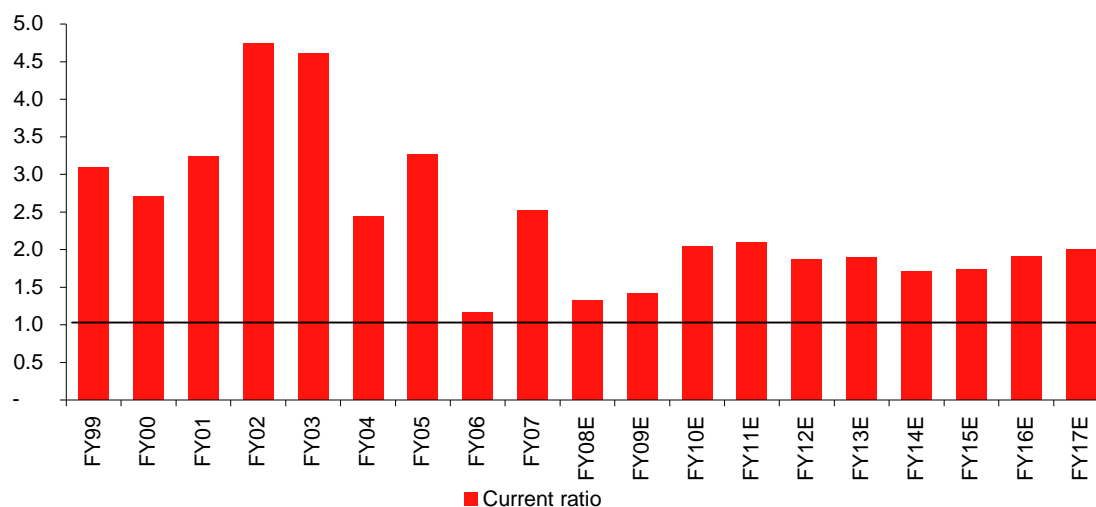


Source: Macquarie Research, March 2008

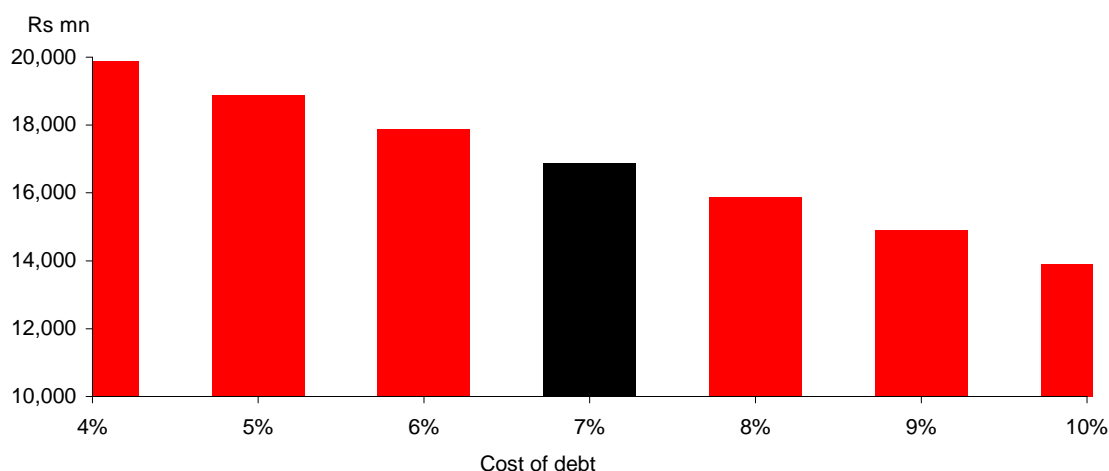
**Fig 4 Aban’s debt servicing capacity ratio could steadily increase to 6.3x in FY3/11**



Source: Macquarie Research, March 2008

**Fig 5 Aban's current ratio is expected to stay above 1.0x**

Source: Macquarie Research, March 2008

**Aban's FY3/09E earnings changes  $\pm 6\%$  for  $\pm 100\text{bp}$  change in cost of debt****Fig 6 Aban's FY3/09E PAT changes by 6% for 100bp swing in interest cost**

Source: Macquarie Research, March 2008

**Aban's debt has an average duration of ~5.4 years****Fig 7 Aban has funded all its acquisitions through long-term debt**

Issuer Company	Coupon (%)	Maturity	Amount	Maturity /Refund Type	Listed
Sinvest ASA	8.3	13-Aug-09	US\$34	CONV/CALL	Oslo
Sinvest ASA	9.5	22-Dec-09	US\$144	AT MATURITY	Oslo
Sinvest ASA	NIBOR + 600	22-Dec-09	US\$48	AT MATURITY	Oslo
Venture Drilling ASA	12.0	10-Sep-10	US\$30	CALL/SINK	Not Listed
Aban Offshore	0.0	15-Apr-11	US\$113	CONVERTIBLE	Singapore
DDI Holding ASA	9.3	19-Jan-12	US\$280	CALL/SINK	Oslo
DDI Holding ASA	10.0	15-Mar-12	US\$77	CALLABLE	Oslo
DDI Holding ASA	US LIBOR + 475	15-Mar-12	US\$160	CALL/SINK	Oslo
DDI Holding ASA	9.3	26-Apr-12	US\$140	CALL/SINK	Oslo
Aban Singapore Pte Ltd	5.5	20-Feb-14	US\$150	PUTABLE	Not Listed
Term Loan from banks	Floating	7 years	US\$1,200	NA	Not Listed

Source: Bloomberg, Macquarie Research, March 2008

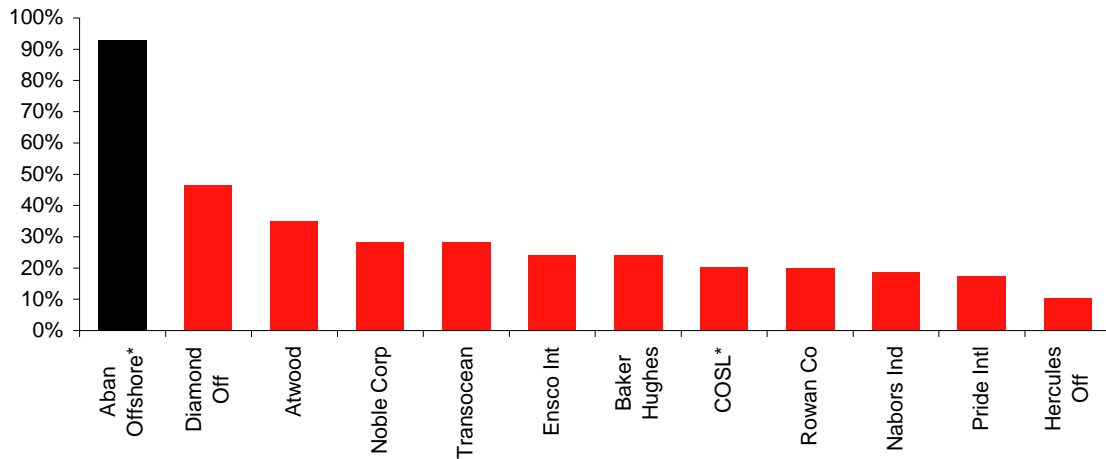
**Aban's domestic exposure shields it from global demand variations**

**Fig 8** Fourteen of Aban's 15 operating rigs are in Asia, eight of which are in India



Source: Company Data, Macquarie Research, March 2008

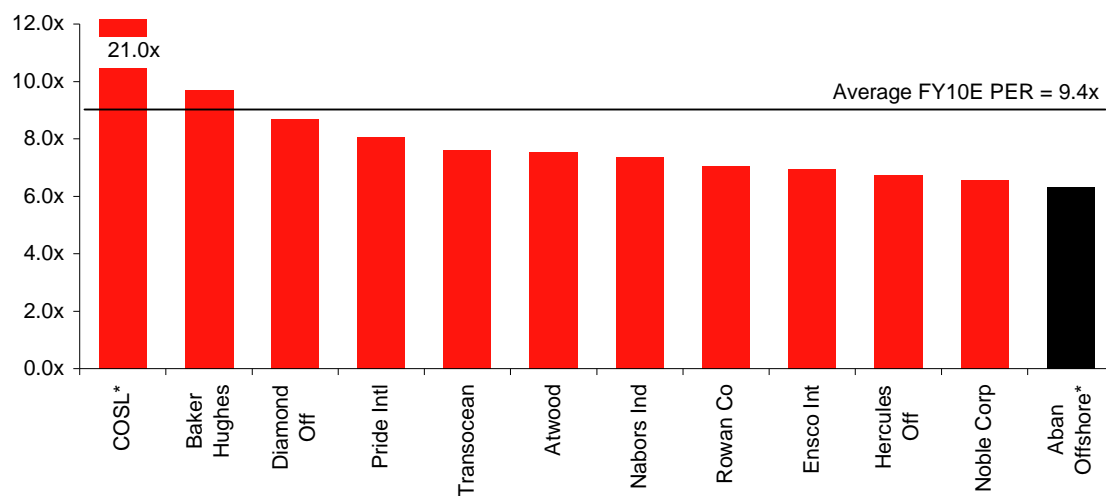
**Fig 9** Aban's high gearing should result in largest FY3/09E RoE among its peers



\* Macquarie Estimates, others are Bloomberg consensus

Source: Macquarie Research, March 2008

**Fig 10 Aban is trading at 32% discount to FY3/10E PER of its global peers**



\* Macquarie Estimates, others are Bloomberg consensus

Source: Macquarie Research, March 2008

**Aban Offshore (ABAN IN, Outperform, Target price: Rs6,000.00)**

<b>Profit &amp; Loss</b>					<b>Profit &amp; Loss</b>						
	2003A	2004A	2005A	2006A		2007A	2008E	2009E	2010E		
Revenue	m	2,684	2,995	2,895	4,902	Revenue	m	7,187	27,857	52,152	64,635
Gross Profit	m	2,412	2,643	2,559	4,317	Gross Profit	m	6,503	25,712	48,136	59,820
Cost of Goods Sold	m	272	352	337	584	Cost of Goods Sold	m	684	2,145	4,016	4,815
EBITDA	m	1,048	1,334	1,502	2,804	EBITDA	m	3,474	16,338	31,014	38,975
Depreciation	m	392	444	538	1,014	Depreciation	m	1,266	3,997	5,041	6,401
Amortisation of Goodwill	m	63	63	63	63	Amortisation of Goodwill	m	63	63	0	0
Other Amortisation	m	0	0	0	0	Other Amortisation	m	0	0	0	0
EBIT	m	593	826	902	1,727	EBIT	m	2,146	12,278	25,972	32,574
Net Interest Income	m	-370	-259	-190	-436	Net Interest Income	m	-2,686	-7,877	-7,807	-7,457
Associates	m	0	0	0	0	Associates	m	204	204	204	204
Exceptionals	m	-1	-1	0	0	Exceptionals	m	0	0	0	0
Forex Gains / Losses	m	0	0	0	0	Forex Gains / Losses	m	0	0	0	0
Other Pre-Tax Income	m	82	157	84	148	Other Pre-Tax Income	m	881	1,682	2,516	3,017
Pre-Tax Profit	m	304	723	796	1,438	Pre-Tax Profit	m	544	6,287	20,886	28,338
Tax Expense	m	-269	-309	-343	-678	Tax Expense	m	-747	-1,608	-3,992	-4,925
Net Profit	m	35	414	454	760	Net Profit	m	-203	4,680	16,893	23,413
Minority Interests	m	0	0	0	0	Minority Interests	m	0	0	0	0
Reported Earnings	m	98	476	517	823	Reported Earnings	m	-140	4,743	16,893	23,413
Adjusted Earnings	m	99	477	517	715	Adjusted Earnings	m	-299	4,584	16,735	23,254
EPS (rep)		2.67	12.93	14.02	22.30	EPS (rep)		-3.79	122.96	438.01	607.06
EPS (adj)		2.68	12.94	14.02	19.37	EPS (adj)		-8.09	118.85	433.90	602.94
EPS Growth yoy (adj)	%	-32.62	382.23	8.28	38.23	EPS Growth (adj)	%	nmf	nmf	265.1	39.0
PE (rep)		1080.50	223.03	205.72	129.29	PE (rep)	x	nmf	31.2	8.8	6.3
PE (adj)		1074.23	222.76	205.72	148.82	PE (adj)	x	nmf	32.3	8.8	6.4
Total DPS	%	1.13	1.70	2.28	2.96	Total DPS	%	3.51	9.84	35.04	48.56
Total Div Yield	%	0.0	0.1	0.1	0.1	Total Div Yield	%	0.1	0.3	0.9	1.3
Weighted Average Shares	%	37	37	37	37	Weighted Average Shares	m	37	39	39	39
Period End Shares	%	37	37	37	37	Period End Shares	m	37	39	39	39
<b>Profit and Loss Ratios</b>					<b>Cashflow Analysis</b>						
		2007A	2008E	2009E	2010E		2007A	2008E	2009E	2010E	
Revenue Growth	%	46.6	287.6	87.2	23.9	EBITDA	m	3,474	16,338	31,014	38,975
EBITDA Growth	%	23.9	370.3	89.8	25.7	Tax Paid	m	-663	-755	-1,631	-4,001
EBIT Growth	%	24.3	472.2	111.5	25.4	Chgs in Working Cap	m	1,286	-3,065	-23	836
Gross Profit Margin	%	90.5	92.3	92.3	92.5	Net Interest Paid	m	-2,686	-7,877	-7,807	-7,457
EBITDA Margin	%	48.3	58.7	59.5	60.3	Other	m	677	1,479	2,313	2,813
EBIT Margin	%	29.9	44.1	49.8	50.4	Operating Cashflow	m	2,087	6,120	23,865	31,166
Net Profit Margin	%	-2.8	16.8	32.4	36.2	Acquisitions	m	-3,079	0	0	0
Payout Ratio	%	nmf	8.3	8.1	8.1	Capex	m	-83,653	-28,201	-6,886	-5,014
EV/EBITDA	x	69.3	15.8	8.4	6.7	Asset Sales	m	0	0	0	0
EV/EBIT	x	108.4	20.9	10.0	8.0	Other	m	0	0	0	0
<b>Balance Sheet Ratios</b>					<b>Investing Cashflow</b>						
ROE	%	-6.2	47.5	77.2	58.1	Dividend (Ordinary)	m	-288	-538	-1,510	-2,032
ROA	%	3.1	9.1	16.2	17.6	Equity Raised	m	1,560	3	0	0
ROIC	%	-5.2	9.1	16.5	21.3	Debt Movements	m	97,427	8,000	-10,000	0
Net Debt/Equity	%	1,794.6	809.1	331.1	143.2	Other	m	-128	4,459	0	0
Interest Cover	x	0.8	1.6	3.3	4.4	Financing Cashflow	m	98,571	11,924	-11,510	-2,032
Price/Book	x	26.7	10.6	5.0	2.9	Net Chg in Cash/Debt	m	13,926	-10,156	5,468	24,120
Book Value per Share		143.8	362.3	761.2	1,315.6	<b>Balance Sheet</b>					
							2007A	2008E	2009E	2010E	
						Cash	m	13,264	3,452	9,328	33,855
						Receivables	m	2,033	6,106	8,573	8,854
						Inventories	m	1,022	2,351	3,301	3,298
						Investments	m	1,464	1,464	1,464	1,464
						Fixed Assets	m	97,648	121,914	123,759	122,373
						Intangibles	m	0	0	0	0
						Other Assets	m	6,091	14,347	24,052	29,038
						Total Assets	m	121,522	149,634	170,477	198,882
						Payables	m	4,539	11,753	19,804	23,747
						Short Term Debt	m	968	968	968	968
						Long Term Debt	m	107,557	115,557	105,557	105,557
						Provisions	m	325	1,087	2,035	2,441
						Other Liabilities	m	2,825	6,293	12,754	15,430
						Total Liabilities	m	116,214	135,659	141,118	148,142
						Shareholders' Funds	m	5,308	13,975	29,358	50,740
						Minority Interests	m	0	0	0	0
						Other	m	0	0	0	0
						Total S/H Equity	m	5,308	13,975	29,358	50,740
						Total Liab & S/H Funds	m	121,522	149,634	170,477	198,882

All figures in INR unless noted.  
Source: Macquarie Research, March 2008

## Important disclosures:

Recommendation definitions	Volatility index definition*	Financial definitions			
<p><b>Macquarie - Australia/New Zealand</b>            Outperform – return &gt;5% in excess of benchmark return (&gt;2.5% in excess for listed property trusts)            Neutral – return within 5% of benchmark return (within 2.5% for listed property trusts)            Underperform – return &gt;5% below benchmark return (&gt;2.5% below for listed property trusts)</p> <p><b>Macquarie - Asia</b>            Outperform – expected return &gt;+10%            Neutral – expected return from -10% to +10%            Underperform – expected return &lt;-10%</p> <p><b>Macquarie First South - South Africa</b>            Outperform – expected return &gt;+10%            Neutral – expected return from -10% to +10%            Underperform – expected return &lt;-10%</p> <p><b>Macquarie - Canada</b>            Outperform – return &gt;5% in excess of benchmark return            Neutral – return within 5% of benchmark return            Underperform – return &gt;5% below benchmark return</p> <p><b>Macquarie - USA</b>            Outperform – return &gt;5% in excess of benchmark return            Neutral – return within 5% of benchmark return            Underperform – return &gt;5% below benchmark return</p> <p><b>Recommendations</b> – 12 months</p> <p><b>Note:</b> Quant recommendations may differ from Fundamental Analyst recommendations</p>	<p><b>Volatility index definition*</b>            This is calculated from the volatility of historic price movements.</p> <p><b>Very high–highest risk</b> – Stock should be expected to move up or down 60–100% in a year – investors should be aware this stock is highly speculative.</p> <p><b>High</b> – 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.</p> <p><b>Medium</b> – stock should be expected to move up or down at least 30–40% in a year.</p> <p><b>Low–medium</b> – stock should be expected to move up or down at least 25–30% in a year.</p> <p><b>Low</b> – stock should be expected to move up or down at least 15–25% in a year.            * Applicable to Australian/NZ stocks only</p>	<p><b>Financial definitions</b>            All "Adjusted" data items have had the following adjustments made:            Added back: goodwill amortisation, provision for catastrophe reserves, IFRS derivatives &amp; hedging, IFRS impairments &amp; IFRS interest expense            Excluded: non recurring items, asset revals, property revals, appraisal value uplift, preference dividends &amp; minority interests</p> <p><b>EPS</b> = adjusted net profit / epowa*  <b>ROA</b> = adjusted ebit / average total assets  <b>ROA Banks/Insurance</b> = adjusted net profit / average total assets  <b>ROE</b> = adjusted net profit / average shareholders funds  <b>Gross cashflow</b> = adjusted net profit + depreciation            *equivalent fully paid ordinary weighted average number of shares</p> <p>All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).</p>			
<b>Recommendation proportions – For quarter ending 31 December 2007</b>					
	<b>AU/NZ</b>	<b>Asia</b>	<b>RSA</b>	<b>USA</b>	<b>CA</b>
Outperform	46.39%	67.98%	73.08%	47.06%	70.00%
Neutral	41.24%	16.78%	21.15%	41.18%	26.92%
Underperform	12.37%	15.24%	5.77%	11.76%	3.08%

**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) ('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 Capital 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 Capital 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 Macquarie Group Limited 94 122 169 279 (MGL). Neither MGL nor MBL guarantee or otherwise 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.

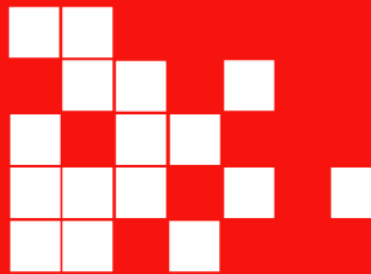
**Other Disclaimers:** In Canada, securities research is prepared, approved and distributed by Macquarie Capital Markets Canada Ltd, a participating organisation of the Toronto Stock Exchange, TSX Venture Exchange & Montréal Exchange. Macquarie Capital Markets North America Ltd., which is a registered 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 Capital Securities (Australia) Ltd (AFSL No. 238947) in Australia, a participating organisation of the Australian Securities Exchange; Macquarie Capital 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); 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 the United States by Macquarie Capital (USA) Inc. Any persons receiving this report directly from Macquarie Capital (USA) Inc. and wishing to effect a transaction in any security described herein should do so with Macquarie Capital (USA) Inc. The information contained in this document is confidential. If you are not the intended recipient, you must not disclose or use the information in this document 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. Macquarie 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. Disclosures with respect to the issuers, if any, mentioned in this research are available at [www.macquarie.com/research/disclosures](http://www.macquarie.com/research/disclosures). © Macquarie Group

<b>Auckland</b> Tel: (649) 377 6433	<b>Bangkok</b> Tel: (662) 694 7999	<b>Calgary</b> Tel: (1 403) 218 6650	<b>Hong Kong</b> Tel: (852) 2823 3588	<b>Jakarta</b> Tel: (62 21) 515 1818	<b>Johannesburg</b> Tel: (27 11) 343 2258	<b>Kuala Lumpur</b> Tel: (60 3) 2059 8833
<b>London</b> Tel: (44 20) 7065 2000	<b>Manila</b> Tel: (63 2) 857 0888	<b>Melbourne</b> Tel: (613) 9635 8139	<b>Montreal</b> Tel: (1 514) 925 2850	<b>Mumbai</b> Tel: (91 22) 6653 3000	<b>Perth</b> Tel: (618) 9224 0888	<b>Seoul</b> Tel: (82 2) 3705 8500
<b>Shanghai</b> Tel: (86 21) 6841 3355	<b>Singapore</b> Tel: (65) 6231 1111	<b>Sydney</b> Tel: (612) 8232 9555	<b>Taipei</b> Tel: (886 2) 2734 7500	<b>Tokyo</b> Tel: (81 3) 3512 7900	<b>Toronto</b> Tel: (1 416) 848 3500	<b>New York</b> Tel: (1 212) 231 2500

Available to clients on the world wide web at [www.macquarie.com/research](http://www.macquarie.com/research) and through Thomson Financial, FactSet, Reuters and Bloomberg.



## Research

### Head of Equity Research

Stephen O'Sullivan (852) 2823 3566

### Automobiles/Auto Parts

Claire Ding (China) (852) 2823 3578  
 Deepak Jain (India) (9122) 6653 3157  
 Kenneth Yap (Indonesia) (6221) 515 7343  
 Toshiyuki Hayami (Japan) (813) 3512 7873  
 Eunsook Kwak (Korea) (822) 3705 8644  
 Linda Huang (Taiwan) (8862) 2734 7539

### Banks and Non-Bank Financials

Ismael Pili (Asia) (65) 6231 2840  
 Nick Lord (Asia, China, Hong Kong) (852) 2823 4774  
 Seshadri Sen (India) (9122) 6653 3053  
 Mark Barclay (Korea) (822) 3705 8658  
 Young Chung Mok (Korea) (822) 3705 8668  
 Chin Seng Tay (Malaysia, S'pore) (65) 6231 2837  
 Matthew Smith (Taiwan) (8862) 2734 7514  
 Alastair Macdonald (Thailand) (662) 694 7741

### Chemicals/Textiles

Scott Weaver (Taiwan) (8862) 2734 7512  
 Jal Irani (India) (9122) 6653 3040  
 Christina Lee (Korea) (822) 3705 8670

### Conglomerates

Gary Ping (Asia) (852) 2823 3557  
 Leah Jiang (China) (8621) 2412 9020  
 Kenneth Yap (Indonesia) (6221) 515 7343  
 Ashwin Sanketh (Singapore) (65) 6231 2830

### Consumer

Nicolas Wang (China) (8621) 2412 9018  
 Jessie Qian (China, Hong Kong) (852) 2823 3568  
 Unmesh Sharma (India) (9122) 6653 3042  
 Sarina Lesmina (Indonesia) (6221) 515 7339  
 Duane Sandberg (Japan) (813) 3512 7867  
 Heather Kang (Korea) (822) 3705 8677  
 HongSuk Na (Korea) (822) 3705 8678  
 Woochang Chung (Korea) (822) 3705 8667  
 Edward Ong (Malaysia) (603) 2059 8982  
 Alex Pomento (Philippines) (632) 857 0899  
 Linda Huang (Taiwan) (8862) 2734 7539

### Custom Products

Patrick Hansen (Japan) (813) 3512 7876  
 Tsumugi Akiba (Japan) (813) 3512 7560

### Emerging Leaders

Hui-Lui Ko (China) (852) 2823 4704  
 Madhur Rao (India) (9122) 6653 3047  
 Robert Burghart (Japan) (813) 3512 7853  
 Heather Kang (Korea) (822) 3705 8677  
 Woochang Chung (Korea) (822) 3705 8667  
 Nadine Javellana (Philippines) (632) 857 0890  
 Scott Weaver (Taiwan) (8862) 2734 7512

### Industrials

Bin Liu (China) (8621) 2412 9006  
 Inderjeetsingh Bhatia (India) (9122) 6653 3166  
 Christopher Cintavey (Japan) (813) 3512 7432  
 Janet Lewis (Japan) (813) 3512 7475  
 Daniel Yang (Korea) (822) 3705 8658

### Insurance

Makarim Salman (Japan) (813) 3512 7421

## Sales

### Regional Heads of Sales

Peter Slater (Boston) (1 617) 217 2103  
 Michelle Paisley (China, Hong Kong) (852) 2823 3516  
 Ulrike Pollak-Tsutsumi (Frankfurt) (49) 69 7593 8747  
 Thomas Renz (Geneva) (41) 22 818 7712  
 Ajay Bhatia (India) (9122) 6653 3200  
 Stuart Smyth (India) (9122) 6653 3200  
 Chris Gray (Indonesia) (6221) 515 7304  
 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 (Philippines) (65) 6231 2840  
 Greg Norton-Kidd (New York) (1 212) 231 2527  
 Luke Sullivan (New York) (1 212) 231 2507

### Media

Jessie Qian (China, Hong Kong) (852) 2823 3568  
 Shubham Majumder (India) (9122) 6653 3049  
 Prem Jearajasingam (Malaysia) (603) 2059 8989  
 Alex Pomento (Philippines) (632) 857 0899

### Metals and Mining

Simon Francis (Asia, China) (852) 2823 3590  
 Laban Yu (China) (852) 2823 3575  
 YeeMan Chin (China) (852) 2823 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  
 Amornrat Cheevavichawalkul (Thai) (662) 694 7829

### Oil and Gas

David Johnson (Asia, China) (852) 2823 4691  
 Scott Weaver (Taiwan) (8862) 2734 7512  
 Jal Irani (India) (9122) 6653 3040  
 Christina Lee (Korea) (822) 3705 8670  
 Mark Barclay (Korea) (822) 3705 8658  
 Edward Ong (Malaysia) (603) 2059 8982  
 Sunaina Dhanuka (Malaysia) (603) 2059 8993  
 Ashwin Sanketh (Singapore) (65) 6231 2830  
 Trevor Buchinski (Thailand) (662) 694 7728

### Pharmaceuticals

Shubham Majumder (India) (9122) 6653 3049  
 Naomi Kumagai (Japan) (813) 3512 7474  
 Christina Lee (Korea) (822) 3705 8670

### Property

Matt Nacard (Asia) (852) 2823 4731  
 Eva Lee (China, Hong Kong) (852) 2823 3573  
 Corinne Jian (China) (852) 2823 4077  
 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  
 Patti Tomaitrichitr (Thailand) (662) 694 7727

### Technology

Warren Lau (Asia) (852) 2823 3592  
 Andrew Lin (China, Hong Kong) (852) 2823 3563  
 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  
 Andy Kung (Taiwan) (8862) 2734 7534  
 Chia-Lin Lu (Taiwan) (8862) 2734 7526  
 Daniel Chang (Taiwan) (8862) 2734 7516  
 Dominic Grant (Taiwan) (8862) 2734 7528  
 James Chiu (Taiwan) (8862) 2734 7517  
 Nicholas Teo (Taiwan) (8862) 2734 7523

### Telecoms

Tim Smart (Asia, China) (852) 2823 3565  
 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) (65) 6231 2842  
 Dominic Grant (Taiwan) (8862) 2734 7528

### Regional Heads of Sales cont'd

Mark Lawrence (New York) (1 212) 231 2516  
 Sheila Schroeder (San Francisco) (1 415) 835 1235  
 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

Adam Zaki (North Asia) (852) 2823 3528  
 Duncan Rutherford (ASEAN, India) (65) 6231 2888  
 Mona Lee (Hong Kong) (852) 2823 3519

### Transport & Infrastructure

Anderson Chow (Asia, China) (852) 2823 4773  
 Jonathan Windham (Asia, China) (852) 2823 5417  
 Tim Bacchus (Asia, China) (852) 2823 3586  
 Wei Sim (China, Hong Kong) (852) 2823 3598  
 Eunsook Kwak (Korea) (822) 3705 8644

### Utilities

Carol Cao (China, Hong Kong) (852) 2823 4075  
 Adam Worthington (Indonesia) (6221) 515 7338  
 Prem Jearajasingam (Malaysia) (603) 2059 8989  
 Dante Tinga (Philippines) (632) 857 0815

### Commodities

Jim Lennon (4420) 7065 2014  
 Adam Rowley (4420) 7065 2013  
 Jonathan Butcher (4420) 7065 5938  
 Max Layton (4420) 7065 2000  
 Bonnie Liu (8621) 2412 9008  
 Henry Liu (8621) 2412 9005

### Data Services

Andrea Clohessy (Asia) (852) 2823 4076  
 Henry Hon (Asia) (852) 2823 3593  
 Max Choi (Asia) (852) 2823 5479

### Economics

Roland Randall (Asean) (852) 2823 3572  
 Bill Belchere (Asia) (852) 2823 4636  
 Eli Polatinsky (Asia) (852) 2823 4074  
 Richard Gibbs (Australia) (612) 8232 3935  
 Paul Cavey (China) (852) 2823 3570  
 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  
 Raelene de Souza (Australia) (612) 8232 8388

### Strategy/Country

Tim Rocks (Asia) (852) 2823 3585  
 Daniel McCormack (Asia) (852) 2823 4073  
 Desh Peramunetilleke (Asia) (852) 2823 3564  
 Jake Lynch (China) (8621) 2412 9007  
 Seshadri Sen (India) (9122) 6653 3053  
 Kenneth Yap (Indonesia) (6221) 515 7343  
 Chris Hunt (Japan) (813) 3512 7878  
 Peter Eadon-Clarke (Japan) (813) 3512 7850  
 Eugene Ha (Korea) (822) 3705 8643  
 Uday Jayaram (Malaysia) (603) 2059 8988  
 Edward Ong (Malaysia) (603) 2059 8982  
 Alex Pomento (Philippines) (632) 857 0899  
 Tuck Yin Soong (ASEAN, Singapore) (65) 6231 2838  
 Alastair Macdonald (Thailand) (662) 694 7741

### Find our research at

Macquarie: [www.macquarie.com.au/research](http://www.macquarie.com.au/research)  
 Thomson: [www.thomson.com/financial](http://www.thomson.com/financial)  
 Reuters: [www.rbr.reuters.com](http://www.rbr.reuters.com)  
 Bloomberg: MAC GO  
 Factset: <http://www.factset.com/home.aspx>  
 Email [macresearch@macquarie.com](mailto:macresearch@macquarie.com) for access

### Sales Trading cont'd

Stuart Goddard (Europe) (44) 20 7065 2033  
 Brendan Rake (India) (9122) 6653 3204  
 Edward Robinson (London) (44) 20 7065 5883  
 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) 2823 4628  
 Depository Receipts - Robert Ansell (852) 2823 4688  
 Derivatives - Tim Connolly (852) 2249 3380  
 Futures - Tim Smith (852) 2823 4637  
 Hedge Fund Sales - Darin Lester (852) 2823 4736  
 Structured Products - Andrew Terlich (852) 2249 3225