

TAIWAN

# Catcher Technology

26 November 2008

**2474 TT** **Neutral**

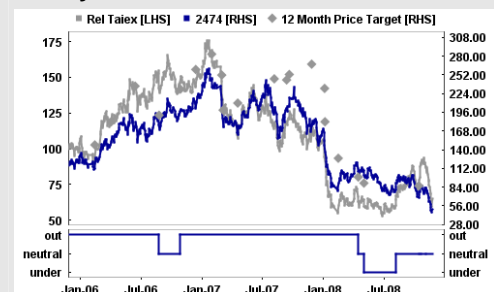
Stock price as of 25 Nov 08	NT\$	52.30
12-month target	NT\$	56.00
Upside/downside	%	+7.1
Valuation	NT\$	48.00-64.00
- PER		

GICS sector	technology hardware & equipment	
Market cap	NT\$m	31,365
30-day avg turnover	NT\$m	643.0
Market cap	US\$m	939
Number shares on issue	m	599.7

## Investment fundamentals

Year end 31 Dec		2007A	2008E	2009E	2010E
Total revenue	m	18,087	18,937	20,377	25,147
Reported profit	m	7,199	4,785	4,845	5,820
Profit bonus exp	m	6,356	4,785	4,845	5,820
Bon exp/rep prof	%	11.7	0.0	0.0	0.0
Adjusted profit	m	7,175	4,798	4,845	5,820
EPS rep	NT\$	12.15	7.81	8.08	9.70
EPS rep growth	%	6.6	-35.7	3.4	20.1
EPS bonus exp	NT\$	10.73	7.81	8.08	9.70
EPS bonus growth %	%	6.4	-27.2	3.4	20.1
PE rep	x	4.3	6.7	6.5	5.4
PE bonus exp	x	4.9	6.7	6.5	5.4
Total DPS	NT\$	3.64	2.18	2.42	2.91
Total div yield	%	7.0	4.2	4.6	5.6
ROA	%	24.1	12.9	11.3	11.7
ROE	%	31.7	17.3	15.3	16.1
EV/EBITDA	x	3.3	4.3	4.2	3.6
Net debt/equity	%	-16.6	-12.8	-16.9	-19.3
Price/book	x	1.2	1.1	0.9	0.8

## 2474 TT rel Taiex performance, & rec history



Source: Datastream, Macquarie Research, November 2008 (all figures in NT\$ unless noted)

## Analysts

<b>Daniel Chang</b> 886 2 2734 7516	daniel.chang@macquarie.com
<b>William Chen</b> 886 2 2734 7533	william.chen@macquarie.com
<b>James Chiu</b> 886 2 2734 7517	james.chiu@macquarie.com

## No excitement

### Event

- In our view, rising demand for low end NBs (more plastic casing) and a deteriorating economy means the bottom for the metal casing sector is still far away. We cut our TP from NT\$86 to NT\$56 and maintain our Neutral rating.

### Impact

- Macquarie vs consensus:** Our 2009 earning forecasts are in line with market expectations. Generally, the market, including us, has had a conservative view on Catcher over recent months. Our next concern is that metal casing sector margins fall due to the sector's higher operating leverage. If demand falls much faster than expected, operating margins may see greater pressure.
- Notebook casings:** Catcher's sales momentum lately has been supported by Apple's new Macbook casings. As the global economy has deteriorated rapidly since October, we believe Catcher's NB metal casing revenue will start to contract from November. In 4Q08, we expect Catcher's sales to grow 10% QoQ; meeting the low end of management's 10–20% guidance because of order cuts among NB customers. In FY09, we expect low end NBs to outgrow high-NT and commercial NBs, so metal casing demand should remain slow.
- 1Q09 visibility remains low:** We expect Catcher's 1Q09 sales to decline by 14% QoQ, but visibility remains low. According to our industry checks, Catcher will ship another two new models to Apple in 1Q09, which could offset some of the seasonal decline from its other NB customers.
- Still too much Apple:** We see Apple's rising share of the NB space as positive for Catcher, which is Apple's main casing supplier. However, this high exposure to Apple has been our key concern. We believe Catcher is still too dependent on one customer, which provides it with both higher revenue and earnings risk.
- Margin improves in 4Q08, but risk to 2009:** We think Catcher's margins will expand further in 4Q08 given a greater contribution from new products, falling raw material prices and better currency movement. However, with high operating leverage, Catcher's FY09 margin is at risk if sales slow faster than expected.

## Earnings revision

- We cut our 09 EPS by 17% due to more conservative margin assumptions.

## Price catalyst

- 12-month price target: NT\$56.00 based on a PER methodology.
- Catalyst: Limited positive catalysts but fair valuation.

## Action and recommendation

- Catcher is now trading at 6–7x FY09E EPS, in line with most major ODM/EMS companies. This follows de-rating of the hardware sector alongside weak Taiex performance. We believe investors will focus on large, liquid names. While its fundamental outlook remains higher risk, we think Catcher's current valuation may not be as attractive as other ODM/EMSs.

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).

**Catcher Technology (2474 TT, Neutral, Target price: NT\$56.00)**

Quarterly Results		3Q/08A	4Q/08E	1Q/09E	2Q/09E	Profit & Loss		2007A	2008E	2009E	2010E
Revenue	m	5,018	5,583	4,777	4,563	Revenue	m	18,087	18,937	20,377	25,147
Gross Profit	m	2,114	2,418	1,875	1,789	Gross Profit	m	8,703	7,833	7,978	9,440
Operating Expenses	m	-684	-774	-636	-607	Operating Expenses	m	-1,273	-2,648	-2,709	-3,303
Operating Income	m	1,430	1,644	1,239	1,182	Operating Income	m	7,430	5,186	5,269	6,137
Net Non-operating income	m	104	65	24	24	Net Non-operating income	m	275	303	100	108
Pre-Tax Income	m	1,535	1,709	1,263	1,206	Pre-Tax Income	m	7,705	5,488	5,369	6,245
Tax Expense	m	-104	-116	-86	-241	Tax Expense	m	-487	-697	-524	-425
Exceptionals	m	7	0	0	0	Exceptionals	m	24	-13	0	0
Minority Interests	m	0	0	0	0	Minority Interests	m	-19	-6	0	0
<b>Reported Earnings</b>	<b>m</b>	<b>1,430</b>	<b>1,592</b>	<b>1,178</b>	<b>965</b>	<b>Reported Earnings</b>	<b>m</b>	<b>7,199</b>	<b>4,785</b>	<b>4,845</b>	<b>5,820</b>
Reported Earnings (bonus exp)	m	1,430	1,592	1,178	965	Reported Earnings (bonus exp)	m	6,356	4,785	4,845	5,820
Bonus exp / Reported Earnings	%	0.0	0.0	0.0	0.0	Bonus exp / Reported Earnings	%	11.7	0.0	0.0	0.0
Adjusted Earnings	m	1,423	1,592	1,178	965	Adjusted Earnings	m	7,175	4,798	4,845	5,820
EBITDA	m	1,751	1,972	1,579	1,533	EBITDA	m	8,296	6,433	6,689	7,716
EPS (rep)	NT\$	2.17	2.66	1.96	1.61	EPS (rep)	NT\$	12.15	7.81	8.08	9.70
EPS pcg growth (rep)	%	-36.1	-28.8	36.3	6.0	EPS growth (rep)	%	6.6	-35.7	3.4	20.1
EPS (rep bonus exp)	NT\$	2.17	2.66	1.96	1.61	EPS (rep bonus exp)	NT\$	10.73	7.81	8.08	9.70
EPS pcg growth (rep bonus exp)	%	-27.7	-19.3	36.3	6.0	EPS growth (rep bonus exp)	%	6.4	-27.2	3.4	20.1
EPS (adj)	NT\$	2.16	2.66	1.96	1.61	EPS (adj)	NT\$	12.10	7.80	8.08	9.70
EPS pcg growth (adj)	%	-36.4	-28.4	36.6	3.5	EPS growth (adj)	%	6.3	-35.5	3.5	20.1
Revenue pcg growth	%	-1.8	1.7	18.6	5.9	PE (rep)	x	4.3	6.7	6.5	5.4
Operating Income pcg growth	%	-27.9	-24.2	36.6	-1.9	PE (rep bonus adj)	x	4.9	6.7	6.5	5.4
Reported Earnings pcg growth	%	-29.3	-28.3	37.2	6.7	PE (adj)	x	4.3	6.7	6.5	5.4
Gross Profit Margin	%	42.1	43.3	39.3	39.2	Total DPS	NT\$	3.64	2.18	2.42	2.91
Operating Income Margin	%	28.5	29.4	25.9	25.9	Total Div Yield	%	7.0	4.2	4.6	5.6
Reported Earnings Margin	%	28.5	28.5	24.6	21.1	Weighted Average Shares	m	592.5	612.7	599.7	599.7
EBITDA Margin	%	34.9	35.3	33.0	33.6	Period End Shares	m	595.7	599.7	599.7	599.7
<b>Profit and Loss Ratios</b>		<b>2007A</b>	<b>2008E</b>	<b>2009E</b>	<b>2010E</b>	<b>Cashflow Analysis</b>		<b>2007A</b>	<b>2008E</b>	<b>2009E</b>	<b>2010E</b>
Revenue Growth	%	19.5	4.7	7.6	23.4	Reported Earnings	m	7,199	4,785	4,845	5,820
Gross Profit Growth	%	10.1	-10.0	1.8	18.3	Depreciation & Amortisation	m	866	1,247	1,420	1,579
Operating Income Growth	%	8.3	-30.2	1.6	16.5	Chgs in Working Cap	m	-2,611	-1,285	-934	-2,264
Reported Earnings Growth	%	11.4	-33.5	1.2	20.1	Other	m	944	186	200	192
EBITDA Growth	%	11.6	-22.5	4.0	15.4	Operating Cashflow	m	6,397	4,934	5,531	5,328
Gross Profit Margin	%	48.1	41.4	39.2	37.5	Acquisitions	m	-368	-200	-200	-200
Operating Income Margin	%	41.1	27.4	25.9	24.4	Capex	m	-5,699	-4,000	-2,400	-2,400
Reported Earnings Margin	%	39.8	25.3	23.8	23.1	Asset Sales	m	0	0	0	0
EBITDA Margin	%	45.9	34.0	32.8	30.7	Other	m	-4	0	0	0
Payout Ratio	%	30.1	27.9	30.0	30.0	Investing Cashflow	m	-6,071	-4,200	-2,600	-2,600
EV/EBITDA	x	3.3	4.3	4.2	3.6	Dividend (Ordinary)	m	-1,242	-2,166	-1,436	-1,453
EV/EBIT	x	3.7	5.3	5.3	4.5	Equity Raised	m	0	581	0	0
<b>Balance Sheet Ratios</b>						Debt Movements	m	4,079	1,200	720	720
ROE	%	31.7	17.3	15.3	16.1	Other	m	911	-466	-285	-285
ROA	%	24.1	12.9	11.3	11.7	Financing Cashflow	m	3,748	-851	-1,000	-1,018
ROIC	%	45.9	20.9	18.4	20.5	Net Chg in Cash/Debt	m	4,453	-117	1,931	1,710
Net Debt/Equity	%	-16.6	-12.8	-16.9	-19.3	Free Cashflow	m	698	934	3,131	2,928
Interest Cover	x	nmf	nmf	nmf	nmf	FCF per Share	NT\$	1.18	1.52	5.22	4.88
Price/Book	x	1.2	1.1	0.9	0.8	P/FCF	x	44.4	34.3	10.0	10.7
Book Value per Share	NT\$	43.5	49.5	56.0	64.3	<b>Balance Sheet</b>		<b>2007A</b>	<b>2008E</b>	<b>2009E</b>	<b>2010E</b>
						Cash	m	10,972	13,662	16,019	18,274
						Receivables	m	7,675	7,648	8,621	10,639
						Inventories	m	2,346	3,624	4,311	5,320
						Investments	m	505	623	724	824
						Fixed Assets	m	14,271	17,400	18,571	19,574
						Intangibles	m	0	0	0	0
						Other Assets	m	761	955	1,073	1,191
						Total Assets	m	36,530	43,911	49,318	55,823
						Payables	m	2,152	2,135	2,861	3,625
						Short Term Debt	m	6,673	8,273	8,513	8,753
						Long Term Debt	m	0	1,600	1,840	2,080
						Provisions	m	0	0	0	0
						Other Liabilities	m	1,773	2,236	2,513	2,791
						Total Liabilities	m	10,598	14,244	15,728	17,248
						Total S/H Equity	m	25,932	29,667	33,590	38,574
						Total Liab & S/H Funds	m	36,530	43,911	49,318	55,823

All figures in NT\$ unless noted.

Source: Company data, Macquarie Research, November 2008

## Important disclosures:

## Recommendation definitions

**Macquarie - Australia/New Zealand**

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

**Macquarie – Asia/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  
 Neutral (Hold) – return within 5% of benchmark return  
 Underperform (Sell) – return >5% below benchmark 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 2008

	AU/NZ	Asia	RSA	USA	CA	EUR
Outperform	43.17%	61.57%	63.08%	53.60%	71.54%	43.00%
Neutral	41.37%	16.43%	30.77%	37.60%	24.61%	48.00%
Underperform	15.47%	22.00%	6.15%	8.80%	3.85%	9.00%

**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 Jasdqa 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 the United States by Macquarie Capital (USA) Inc. Macquarie Capital (USA) Inc. affiliate research reports and affiliate employees are not subject to the disclosure requirements of FINRA rules. 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. 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. 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: (2711) 583 2000	<b>Kuala Lumpur</b> Tel: (60 3) 2059 8833
<b>London</b> Tel: (44 20) 3037 4400	<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.

## Asia Research

### Head of Equity Research

Stephen O'Sullivan (852) 2823 3566

### Automobiles/Auto Parts

Deepak Jain (India) (9122) 6653 3157  
 Kenneth Yap (Indonesia) (6221) 515 7343  
 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) (65) 6231 2840  
 Nick Lord (Asia, China, Hong Kong) (852) 2823 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

Scott Weaver (Taiwan) (8862) 2734 7512  
 Jal Irani (India) (9122) 6653 3040  
 Christina Lee (Korea) (822) 3705 8670  
 Sunaina Dhanuka (Malaysia) (603) 2059 8993

### Conglomerates

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

### Consumer

Mohan Singh (Asia) (852) 3901 1111  
 Jessie Qian (China, Hong Kong) (852) 2823 3568  
 Charles Yan (China) (8621) 2412 9033  
 Unmesh Sharma (India) (9122) 6653 3042  
 Sarina Lesmina (Indonesia) (6221) 515 7339  
 Duane Sandberg (Japan) (813) 3512 7867  
 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  
 Hiu-Lui Ko (China) (852) 2823 4704  
 Minoru Tayama (Japan) (813) 3512 6058  
 Robert Burghart (Japan) (813) 3512 7853  
 Heather Kang (Korea) (822) 3705 8677  
 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  
 Michael Na (Korea) (822) 2095 7222  
 Sunaina Dhanuka (Malaysia) (603) 2059 8993  
 David Gambrill (Thailand) (662) 694 7753

### Insurance

Mark Kellock (Asia) (852) 2823 3567  
 Seshadri Sen (Asia, India) (9122) 6653 3053  
 Makarim Salman (Japan) (813) 3512 7421

### 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

### 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  
 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

Abhishek Singhal (India) (9122) 6653 3052  
 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  
 Chris Cheng (China, Hong Kong) (852) 2823 3581  
 Tata Goeyardi (Hong Kong) (852) 2823 4077  
 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) 2823 3587  
 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  
 Scott Weaver (Taiwan) (8862) 2734 7512

### Technology

Warren Lau (Asia) (852) 2823 3592  
 Kishore Belai (India) (9122) 6653 3046  
 Damian Thong (Japan) (813) 3512 7877  
 David Gibson (Japan) (813) 3512 7880  
 George Chang (Japan) (813) 3512 7854  
 Yoshihiro Shimada (Japan) (813) 3512 7862  
 Yukihiro Goto (Japan) (813) 3512 5984  
 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  
 James Chiu (Taiwan) (8862) 2734 7517  
 Nicholas Teo (Taiwan) (8862) 2734 7523

### Telecoms

Tim Smart (Asia, China) (852) 2823 3565  
 Bin Liu (China) (852) 2249 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

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  
 Sunaina Dhanuka (Malaysia) (603) 2059 8993

### Utilities

Carol Cao (China, Hong Kong) (852) 2823 4075  
 Deepak Jain (India) (9122) 6653 3157  
 Adam Worthington (Indonesia) (6221) 515 7338  
 Kakutoshi Otori (Japan) (813) 3512 7296  
 Prem Jearajasingam (Malaysia) (603) 2059 8989  
 Alex Pomento (Philippines) (632) 857 0899

### 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  
 Rakesh Arora (9122) 6653 3054

### Data Services

Andrea Clohessy (Asia) (852) 2823 4076

### Economics

Bill Belchere (Asia) (852) 2823 4636  
 Rajeev Malik (ASEAN, India) (65) 6231 2841  
 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  
 Tsumugi Akiba (Japan) (813) 3512 7560

### Strategy/Country

Tim Rocks (Asia) (852) 2823 3585  
 Daniel McCormack (Asia) (852) 2823 4073  
 Desh Peramunetilleke (Asia) (852) 2823 3564  
 Mahesh Kedia (Asia) (852) 2823 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  
 Eugene Ha (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](http://www.macquarie.com.au/research)  
 Thomson: [www.thomson.com/financial](http://www.thomson.com/financial)  
 Reuters: [www.knowledge.reuters.com](http://www.knowledge.reuters.com)  
 Bloomberg: MAC GO  
 Factset: <http://www.factset.com/home.aspx>  
 Email [macresearch@macquarie.com](mailto:macresearch@macquarie.com) for access

## 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 Smythe (India) (9122) 6653 3200  
 Chris Gray (Indonesia) (6221) 515 7304  
 K.Y. Nam (Korea) (822) 3705 8607  
 Lena Yong (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

### Regional Heads of Sales cont'd

Scot Mackie (New York) (1 212) 231 2848  
 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  
 Michael Newman (Tokyo) (813) 3512 7920  
 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  
 Mona Lee (Hong Kong) (852) 2823 3519  
 Stuart Goddard (Europe) (44) 20 7065 2033

### Sales Trading cont'd

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