

TAIWAN

Formosa Petrochemical

11 November 2008

6505 TT Underperform

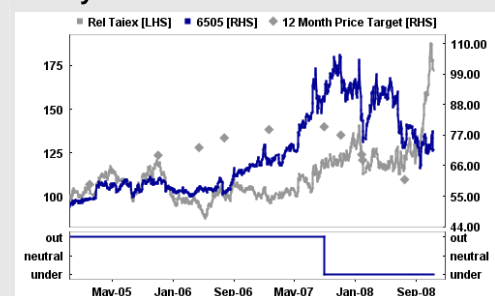
| | | |
|-----------------------------|------|-------|
| Stock price as of 07 Nov 08 | NT\$ | 71.70 |
| 12-month target | NT\$ | 56.00 |
| Upside/downside | % | -21.9 |
| Valuation | NT\$ | 70.14 |
| - DCF (WACC 8.2%) | | |

| | | |
|------------------------|-------|---------|
| GICS sector | | energy |
| Market cap | NT\$m | 663,118 |
| 30-day avg turnover | NT\$m | 332.9 |
| Market cap | US\$m | 20,211 |
| Number shares on issue | m | 9,249 |

Investment fundamentals

| Year end 31 Dec | | 2007A | 2008E | 2009E | 2010E |
|------------------|------|-------|-------|-------|-------|
| Total revenue | bn | 699.3 | 922.3 | 712.6 | 699.5 |
| EBIT | bn | 76.2 | 60.4 | 40.6 | 43.1 |
| EBIT Growth | % | 42.5 | -20.7 | -32.8 | 6.0 |
| Reported profit | bn | 69.6 | 50.7 | 32.8 | 35.3 |
| Adjusted profit | bn | 69.6 | 50.7 | 32.8 | 35.3 |
| EPS rep | NT\$ | 7.53 | 5.48 | 3.54 | 3.82 |
| EPS rep growth | % | 56.5 | -27.2 | -35.3 | 7.7 |
| EPS bonus growth | % | 56.5 | -27.2 | -35.3 | 7.7 |
| PE rep | x | 9.5 | 13.1 | 20.2 | 18.8 |
| PE bonus exp | x | 9.5 | 13.1 | 20.2 | 18.8 |
| Total DPS | NT\$ | 6.70 | 4.93 | 3.01 | 3.43 |
| Total div yield | % | 9.3 | 6.9 | 4.2 | 4.8 |
| ROA | % | 16.4 | 11.9 | 8.3 | 9.3 |
| ROE | % | 29.3 | 20.2 | 13.9 | 15.1 |
| EV/EBITDA | x | 8.3 | 8.6 | 11.5 | 11.5 |
| Net debt/equity | % | 63.1 | 82.0 | 68.8 | 64.6 |
| Price/book | x | 2.6 | 2.7 | 2.9 | 2.8 |

6505 TT rel Taiex performance, & rec history



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

Analyst

Scott Weaver

886 2 2734 7512

scott.weaver@macquarie.com

Pressure building

Event

- We reduce our target price for Formosa Petrochemical (FPCC) to NT\$56 from NT\$61 after reducing our EBIT projections and increasing our downcycle discount to 15% from 20%. We maintain our Underperform rating. Pressures on FPCC's refining and petrochemical operations are increasing amid weakening global economic conditions. We have reduced our FY09E EPS significantly, due primarily to a lower EBIT projection and removal of a projected NT\$20bn inventory gain.

Impact

- Macquarie vs consensus.** We believe consensus EPS estimates for FPCC are too optimistic. We are 11% below consensus for FY08E, 33% below for FY09E and 11% lower for FY10E.
- Unprecedented decline in ethylene.** The petrochemical sector is in the midst of a significant downturn due to extremely weak demand, and new supply is at the doorstep. Asian spot prices for the key intermediate, ethylene, have fallen by 76% since July to US\$385/t from US\$1,635/t. FPCC will likely keep its 1.2m tpa #3 naphtha cracker idled through at least this month.
- Complex refining margins have weakened.** Conditions for FPCC's refining segment have also declined as slowing global conditions contribute to a downturn in refined fuel prices. Our measure of Asian complex refining margins is averaging about US\$1.3/bbl this quarter compared with US\$7.1/bbl in 3Q08 and US\$6.7/bbl in 4Q07.
- Removal of our FY09E inventory gain.** One significant change to our FY09E EPS is that we have removed our NT\$20bn (NT\$2.16/sh) assumption for a projected inventory gain for FPCC in 1Q09 following a change in FPCC's accounting treatment for inventories. We believe the recent rapid decline in oil and refined fuel prices has reduced the potential scope for such a gain.

Earnings revision

- We reduce our FY08E EPS by 2% after reducing our EBIT projection but also reducing our tax assumption. We have reduced our FY09E EPS by 42% after removing our projection for the inventory gain discussed above as well as reducing our EBIT projection. We have made little change to our FY10E EPS.

Price catalyst

- 12-month price target: NT\$56.00 based on a Sum of Parts methodology.
- Catalyst: Declining sales and earnings amid weakening global demand conditions and new capacity arrivals.

Action and recommendation

- We maintain our Underperform rating for FPCC, and believe the stock's valuations are overly demanding given the challenges ahead. Our NT\$56/sh target price represents 22% potential downside.

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.

Pressure building

We reduce our target price for FPCC to NT\$56 from NT\$61 and maintain our Underperform rating on the stock. Our target price is based on a sum-of-the-parts approach, with our core business valuation based on DCF (see Figure 1). The main factors behind our lower target price are reductions to our EBIT projections as well as an increase in our downcycle discount to 20% from 15%, as we now project a larger decline in EPS next year. At our NT\$56 target price, FPCC would be trading at a 2.2x FY09E P/BV and an 8.8% FY08E yield.

Fig 1 FPCC per-share valuation

| | NT\$/share | Comments |
|-----------------------------|--------------|---|
| Core business | 86.20 | Based on DCF |
| Long-term investments | 2.24 | Mailiao Power at 1.5x BV, others at 1x BV |
| Adjusted asset value | 88.44 | |
| Net debt | (18.30) | At FY08E BV |
| Equity value | 70.14 | |
| At 20% downcycle discount | 56.11 | |
| Target price: | 56.00 | |

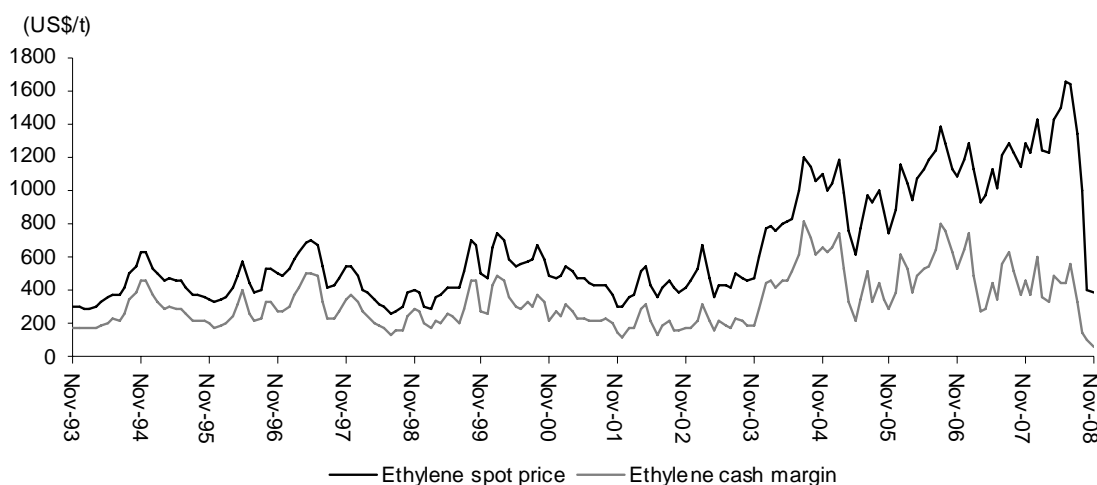
Source: Macquarie Research, November 2008

We have reduced our EBIT projections after factoring in recent results and the recent changes to our regional oil and petrochemical price assumptions. We have also pared back our utilisation assumptions. The intermediate petrochemical segment is experiencing an unprecedented decline in product pricing brought on by a downturn in demand that is more severe than we originally expected. We believe the pressure in our view will worsen next year as new global capacity comes on-stream. FPCC is also seeing a weakening in its refining conditions, which we believe is also being driven by softening global economic conditions.

One significant change to our FY09 outlook is that we have removed our assumption for a NT\$20bn (NT\$2.16/sh) gain on an accounting methodology change to a weighted average approach for inventory from FIFO. We believe the recent steep decline in oil and refined fuel prices has made such a gain unlikely.

Figure 2 highlights the unprecedented decline this quarter in prices for ethylene, FPCC's largest intermediate petrochemical product. The spread of ethylene over naphtha has also narrowed significantly. Asian spot prices for ethylene have fallen by 76% since July to US\$385/t from US\$1,635/t. This decline is driven by very weak demand conditions, as well as declining oil prices.

Fig 2 East Asian spot ethylene prices and spread over naphtha

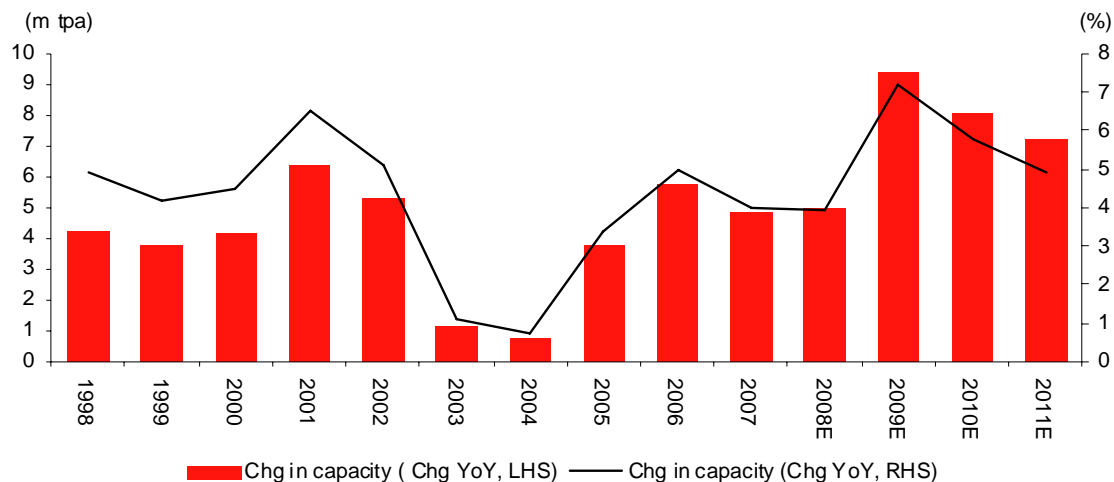


Source: Datastream, Platts, Macquarie Research, November 2008

FPCC indicated in a recent analyst conference that it plans to keep its #3 naphtha cracker shut down until perhaps the end of November in light of weak demand for downstream petrochemicals. A report last week in the chemical news service, ICIS, indicates that FPCC is operating its #1 and #2 crackers at 80% utilisation, again due to weak demand conditions. The three crackers together have total ethylene capacity of 2.9m tpa, but we estimate current overall utilisation for the three naphtha cracker units is only about 47%. Intermediate petrochemicals represented by the three naphtha crackers represent 26% of our FY09E external sales for FPCC.

In the midst of extremely weak demand conditions, we expect ethylene to come under further pressure over the next 12 months as substantial new global capacity comes on-stream in the Middle East and China. Much of the Middle East capacity will use inexpensive natural gas as feedstock. Figure 3 provides our outlook for global ethylene capacity additions.

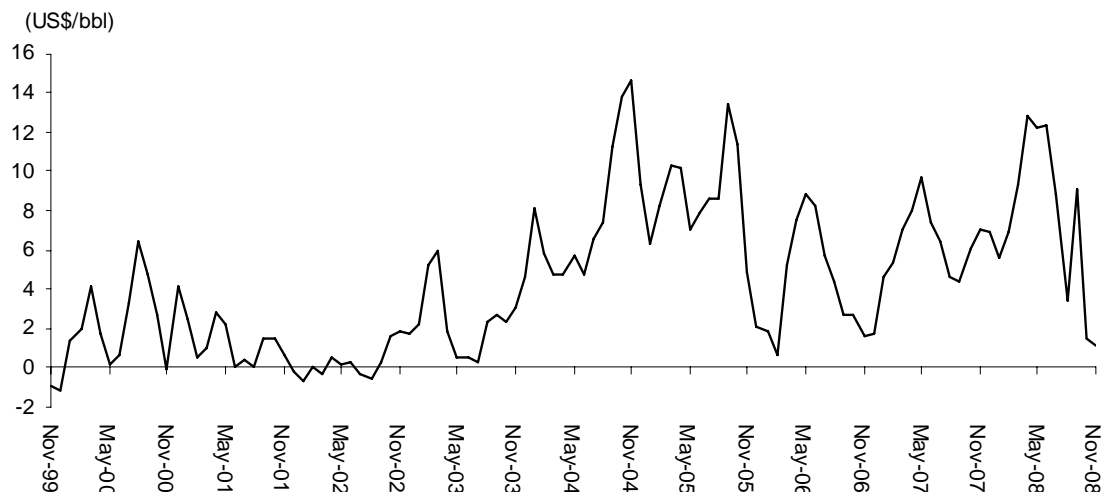
Fig 3 Global ethylene capacity additions



Source: CMAI, ICIS, Macquarie Research, November 2008

We believe refining conditions for FPCC have also weakened. Our measure of Asian complex refining margins is averaging about US\$1.3/bbl this quarter compared with US\$7.1/bbl in 3Q08 and US\$6.7/bbl in 4Q07 (see Figure 4). Although refined fuel prices have declined along with oil prices, US demand for gasoline and distillates is still below year-ago levels, based on US Energy Information Administration data. We look for weakening economic conditions and new capacity in China and India to continue to apply pressure to refining conditions.

Fig 4 Asian complex refining margins



Source: CMAI, Bloomberg, Macquarie Research, November 2008

Earnings estimates changes

We maintain our overall outlook that a mix of global monetary tightening and new capacity will pressure FPCC's earnings through FY09. However, we have reduced our EBIT projections for FPCC after factoring in disappointing recent results and recent changes to our regional oil and petrochemical price assumptions. We have also pared back our FY09E utilisation assumptions for FPCC's intermediate petrochemical operations to 88% from 97%. We have reduced our FY08E EBIT by 7%, our FY09E EBIT by 11%, while making little change to our FY10E EBIT. In 3Q08, FPCC posted an EBIT of NT\$12.3bn, down by 40% YoY and 52% QoQ as declining conditions in the intermediate petrochemical segment and a QoQ cooling in refining conditions took a toll.

In addition, we have removed our assumption for a NT\$20bn (NT\$2.16/sh) FY09E non-recurring inventory gain following on a change to accounting methodology for oil and refined fuel inventories. We have reduced our FY08E taxes after the company took a larger-than-expected tax credit in 3Q08.

Overall, we reduce our FY08E EPS by 2% and our FY09E EPS for FPCC by 42%, while making little change to our FY10E EPS. Figure 5 highlights the main changes to our FY08 and FY09 earnings projections.

Fig 5 Changes to our FPCC earnings outlook (NT\$m)

| | FY08E Previous (NT\$m) | FY08E New (NT\$m) | Change (%) | FY09E Previous (NT\$m) | FY09E New (NT\$m) | Change (%) |
|---------------------------|------------------------------|-------------------------|---------------|------------------------------|-------------------------|---------------|
| Sales | 1,020,375 | 922,266 | -10 | 863,937 | 712,639 | -18 |
| COGS | -944,523 | -851,792 | -10 | -807,435 | -662,288 | -18 |
| Gross profit | 75,852 | 70,473 | -7 | 56,502 | 50,351 | -11 |
| <i>Gross margin (%)</i> | 7.4 | 7.6 | 3 | 6.5 | 7.1 | 8 |
| SG&A | -10,751 | -10,047 | -7 | -10,674 | -9,731 | -9 |
| EBIT | 65,101 | 60,427 | -7 | 45,828 | 40,620 | -11 |
| <i>EBIT margin (%)</i> | 6.4 | 6.6 | 3 | 5.3 | 5.7 | 7 |
| Net interest | -4,578 | -5,054 | 10 | -5,228 | -5,094 | -3 |
| Investment income | 2,500 | 3,500 | 40 | 2,250 | 2,250 | 0 |
| Other non-operating items | 418 | 780 | NA | 21,190 | 1,254 | -94 |
| Pre-tax profit | 63,441 | 59,653 | -6 | 64,040 | 39,030 | -39 |
| Taxes | -11,578 | -8,984 | -22 | -7,940 | -6,253 | -21 |
| Net profit | 51,863 | 50,668 | -2 | 56,100 | 32,777 | -42 |
| EPS (NT\$) | 5.61 | 5.48 | -2 | 6.07 | 3.54 | -42 |

Source: Macquarie Research, November 2008

We look for FPCC's share price to come under pressure from declining conditions in its core businesses. However, we also believe the share price has likely been supported by internal buying by the Formosa Group, and perhaps government-related funds, and look for such support to continue. In 3Q08, the Formosa Group member Chang Keng Memorial Hospital (unlisted) increased its stake in FPCC by 5m shares, based on Bloomberg data. FPCC has a large market cap, but a very small free float as most of its shares are owned by Formosa Group members (see Figure 6). Despite this potential support, we believe that over time the company's valuation multiples will decline.

Fig 6 Ownership structure of FPCC

| Owner | Stake (%) | Member of Formosa Group? |
|---|--------------|--------------------------|
| Formosa Plastics (1301 TT, NT\$55.5, UP, NTP: NT\$49) | 29.3 | Yes |
| FCFC (1326 TT, NT\$51.9, UP, TP: NT\$45) | 24.9 | Yes |
| Nan Ya Plastics (1303 TT, NT\$42.5, UP, TP: NT\$42) | 23.8 | Yes |
| Chang Keng Memorial Hospital (unlisted) | 4.4 | Yes |
| Formosa Taffeta (1434 TT, NT\$19, UP, TP: NT\$20) | 3.8 | Yes |
| SUB-TOTAL OF ESTIMATED FORMOSA GROUP OWNERSHIP | 86.2 | |
| Foreign investors | 6.0 | No |
| Other non-group investors | 7.8 | No |
| TOTAL | 100.0 | |
| <i>Estimated free float</i> | <i>13.8</i> | |

Source: Company data, Bloomberg, TEJ, November 2008

Formosa Petrochemical (6505 TT, Underperform, Target price: NT\$56.00)

| Quarterly Results | | | | | Profit & Loss | | | | | | |
|--------------------------------|------|--------------|--------------|--------------|---------------|-----------------------------------|-------|--------------|--------------|--------------|--------------|
| | | 3Q/08A | 4Q/08E | 1Q/09E | 2Q/09E | | 2007A | 2008E | 2009E | 2010E | |
| Revenue | m | 255,237 | 171,317 | 156,781 | 163,907 | Revenue | m | 699,315 | 922,266 | 712,639 | 699,512 |
| Gross Profit | m | 14,377 | 10,056 | 11,077 | 11,581 | Gross Profit | m | 85,926 | 70,473 | 50,351 | 52,450 |
| Operating Expenses | m | -2,084 | -2,673 | -2,141 | -2,238 | Operating Expenses | m | -9,773 | -10,047 | -9,731 | -9,396 |
| Operating Income | m | 12,293 | 7,384 | 8,936 | 9,343 | Operating Income | m | 76,153 | 60,427 | 40,620 | 43,054 |
| Net Non-operating income | m | 515 | 261 | -336 | -365 | Net Non-operating income | m | 2,376 | -774 | -1,590 | -675 |
| Pre-Tax Income | m | 12,808 | 7,645 | 8,601 | 8,978 | Pre-Tax Income | m | 78,529 | 59,653 | 39,030 | 42,379 |
| Tax Expense | m | 3,191 | -2,539 | -1,563 | -1,563 | Tax Expense | m | -8,918 | -8,984 | -6,253 | -7,088 |
| Exceptionals | m | 0 | 0 | 0 | 0 | Exceptionals | m | 0 | 0 | 0 | 0 |
| Minority Interests | m | 0 | 0 | 0 | 0 | Minority Interests | m | 0 | 0 | 0 | 0 |
| Reported Earnings | m | 15,999 | 5,105 | 7,037 | 7,415 | Reported Earnings | m | 69,611 | 50,668 | 32,777 | 35,290 |
| Reported Earnings (bonus exp) | m | 15,999 | 5,105 | 7,037 | 7,415 | Reported Earnings (bonus exp) | m | 69,611 | 50,668 | 32,777 | 35,290 |
| Bonus exp / Reported Earnings | % | | | | | Bonus exp / Reported Earnings | % | | | | |
| Adjusted Earnings | m | 15,999 | 5,105 | 7,037 | 7,415 | Adjusted Earnings | m | 69,611 | 50,668 | 32,777 | 35,290 |
| EBITDA | m | 20,574 | 15,665 | 15,399 | 16,099 | EBITDA | m | 96,999 | 93,552 | 69,997 | 69,657 |
| EPS (rep) | NT\$ | 1.73 | 0.55 | 0.76 | 0.80 | EPS (rep) | NT\$ | 7.53 | 5.48 | 3.54 | 3.82 |
| EPS pcp growth (rep) | % | -30.0 | -72.0 | -28.3 | -62.4 | EPS growth (rep) | % | 56.5 | -27.2 | -35.3 | 7.7 |
| EPS (rep bonus exp) | NT\$ | 1.73 | 0.55 | 0.76 | 0.80 | EPS (rep bonus exp) | NT\$ | 7.53 | 5.48 | 3.54 | 3.82 |
| EPS pcp growth (rep bonus exp) | % | -30.0 | -72.0 | -28.3 | -62.4 | EPS growth (rep bonus exp) | % | 56.5 | -27.2 | -35.3 | 7.7 |
| EPS (adj) | NT\$ | 1.73 | 0.55 | 0.76 | 0.80 | EPS (adj) | NT\$ | 7.53 | 5.48 | 3.54 | 3.82 |
| EPS pcp growth (adj) | % | -30.0 | -72.0 | -28.3 | -62.4 | EPS growth (adj) | % | 54.9 | -27.2 | -35.3 | 7.7 |
| Revenue pcp growth | % | 36.0 | -21.3 | -32.0 | -38.2 | PE (rep) | x | 9.5 | 13.1 | 20.2 | 18.8 |
| Operating Income pcp growth | % | -39.8 | -59.7 | -41.2 | -63.5 | PE (rep bonus adj) | x | 9.5 | 13.1 | 20.2 | 18.8 |
| Reported Earnings pcp growth | % | -30.0 | -72.0 | -28.3 | -62.4 | PE (adj) | x | 9.5 | 13.1 | 20.2 | 18.8 |
| Gross Profit Margin | % | 5.6 | 5.9 | 7.1 | 7.1 | Total DPS | NT\$ | 6.70 | 4.93 | 3.01 | 3.43 |
| Operating Income Margin | % | 4.8 | 4.3 | 5.7 | 5.7 | Total Div Yield | % | 9.3 | 6.9 | 4.2 | 4.8 |
| Reported Earnings Margin | % | 6.3 | 3.0 | 4.5 | 4.5 | Weighted Average Shares | m | 9,248 | 9,248 | 9,248 | 9,248 |
| EBITDA Margin | % | 8.1 | 9.1 | 9.8 | 9.8 | Period End Shares | m | 9,248 | 9,248 | 9,248 | 9,248 |
| Profit and Loss Ratios | | 2007A | 2008E | 2009E | 2010E | Cashflow Analysis | | 2007A | 2008E | 2009E | 2010E |
| Revenue Growth | % | 32.1 | 31.9 | -22.7 | -1.8 | Reported Earnings | m | 69,611 | 50,668 | 32,777 | 35,290 |
| Gross Profit Growth | % | 35.6 | -18.0 | -28.6 | 4.2 | Depreciation & Amortisation | m | 20,846 | 33,126 | 29,376 | 26,603 |
| Operating Income Growth | % | 42.5 | -20.7 | -32.8 | 6.0 | Chgs in Working Cap | m | -25,857 | -40,415 | 30,180 | 2,688 |
| Reported Earnings Growth | % | 56.5 | -27.2 | -35.3 | 7.7 | Other | m | -210 | -3,250 | -2,000 | -2,625 |
| EBITDA Growth | % | 34.5 | -3.6 | -25.2 | -0.5 | Operating Cashflow | m | 64,390 | 40,128 | 90,333 | 61,956 |
| Gross Profit Margin | % | 12.3 | 7.6 | 7.1 | 7.5 | Acquisitions | m | -79 | 0 | 0 | -19,136 |
| Operating Income Margin | % | 10.9 | 6.6 | 5.7 | 6.2 | Capex | m | -21,202 | -14,307 | -4,000 | -10,000 |
| Reported Earnings Margin | % | 10.0 | 5.5 | 4.6 | 5.0 | Asset Sales | m | 0 | 0 | 0 | 0 |
| EBITDA Margin | % | 13.9 | 10.1 | 9.8 | 10.0 | Other | m | -1,598 | 0 | 0 | 0 |
| Payout Ratio | % | 89.0 | 90.0 | 85.0 | 90.0 | Investing Cashflow | m | -22,879 | -14,307 | -4,000 | -29,136 |
| EV/EBITDA | x | 8.3 | 8.6 | 11.5 | 11.5 | Dividend (Ordinary) | m | -40,692 | -61,962 | -45,601 | -27,861 |
| EV/EBIT | x | 10.5 | 13.0 | 19.4 | 18.1 | Equity Raised | m | 0 | 0 | 0 | 0 |
| Balance Sheet Ratios | | | | | | Debt Movements | m | 1,476 | 40,000 | -30,000 | -5,000 |
| ROE | % | 29.3 | 20.2 | 13.9 | 15.1 | Other | m | 0 | 0 | 0 | 0 |
| ROA | % | 16.4 | 11.9 | 8.3 | 9.3 | Financing Cashflow | m | -39,216 | -21,962 | -75,601 | -32,861 |
| ROIC | % | 17.7 | 12.2 | 7.7 | 9.2 | Net Chg in Cash/Debt | m | 2,296 | 3,860 | 10,732 | -41 |
| Net Debt/Equity | % | 63.1 | 82.0 | 68.8 | 64.6 | Free Cashflow | m | 43,188 | 25,822 | 86,333 | 51,956 |
| Interest Cover | x | 18.4 | 12.0 | 8.0 | 8.7 | FCF per Share | NT\$ | 4.67 | 2.79 | 9.34 | 5.62 |
| Price/Book | x | 2.6 | 2.7 | 2.9 | 2.8 | P/FCF | x | 15.4 | 25.7 | 7.7 | 12.8 |
| Book Value per Share | NT\$ | 27.9 | 26.3 | 24.9 | 25.7 | Balance Sheet | | 2007A | 2008E | 2009E | 2010E |
| | | | | | | Cash | m | 10,511 | 9,793 | 10,525 | 10,483 |
| | | | | | | Receivables | m | 76,477 | 101,070 | 78,097 | 76,659 |
| | | | | | | Inventories | m | 52,368 | 77,011 | 63,507 | 62,047 |
| | | | | | | Investments | m | 29,896 | 29,896 | 29,896 | 29,896 |
| | | | | | | Fixed Assets | m | 281,963 | 263,144 | 237,768 | 221,165 |
| | | | | | | Intangibles | m | 0 | 0 | 0 | 0 |
| | | | | | | Other Assets | m | 39,867 | 39,592 | 41,312 | 62,811 |
| | | | | | | Total Assets | m | 491,085 | 520,507 | 461,105 | 463,061 |
| | | | | | | Payables | m | 21,417 | 29,741 | 23,124 | 22,593 |
| | | | | | | Short Term Debt | m | 41,803 | 37,225 | 27,225 | 27,225 |
| | | | | | | Long Term Debt | m | 131,662 | 171,662 | 141,662 | 136,662 |
| | | | | | | Provisions | m | 0 | 0 | 0 | 0 |
| | | | | | | Other Liabilities | m | 38,004 | 38,977 | 39,016 | 39,074 |
| | | | | | | Total Liabilities | m | 232,886 | 277,605 | 231,027 | 225,554 |
| | | | | | | Total S/H Equity | m | 258,199 | 242,903 | 230,078 | 237,507 |
| | | | | | | Total Liab & S/H Funds | m | 491,085 | 520,507 | 461,105 | 463,061 |

All figures in NT\$ unless noted.
Source: Macquarie Research, November 2008

Important disclosures:

| Recommendation definitions | Volatility index definition* | Financial definitions |
|--|---|--|
| <p>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)</p> <p>Macquarie – Asia/Europe Outperform – expected return >+10% Neutral – expected return from -10% to +10% Underperform – expected return <-10%</p> <p>Macquarie First South - South Africa Outperform – expected return >+10% Neutral – expected return from -10% to +10% Underperform – expected return <-10%</p> <p>Macquarie – Canada Outperform – return >5% in excess of benchmark return Neutral – return within 5% of benchmark return Underperform – return >5% below benchmark return</p> <p>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</p> <p>Recommendations – 12 months</p> <p>Note: Quant recommendations may differ from Fundamental Analyst recommendations</p> | <p>This is calculated from the volatility of historic price movements.</p> <p>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.</p> <p>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.</p> <p>Medium – stock should be expected to move up or down at least 30–40% in a year.</p> <p>Low–medium – stock should be expected to move up or down at least 25–30% in a year.</p> <p>Low – stock should be expected to move up or down at least 15–25% in a year.</p> <p>* Applicable to Australian/NZ stocks only</p> | <p>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</p> <p>EPS = adjusted net profit / epowa* 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</p> <p>All Reported numbers for Australian/NZ listed stocks are modelled under IFRS (International Financial Reporting Standards).</p> |

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% |

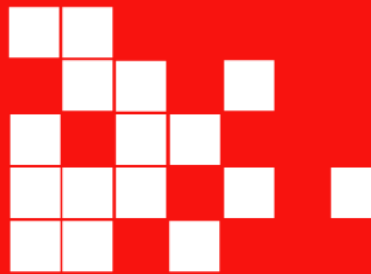
Analyst Certification: The views expressed in this research accurately reflect the personal views of the analyst(s) about the subject securities or issuers and no part of the compensation of the analyst(s) was, is, or will be directly or indirectly related to the inclusion of specific recommendations 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 Jasdak 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. © Macquarie Group

| | | | | | | |
|---|---|--|--|---|--|--|
| 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: (27 11) 343 2258 | 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 |

Available to clients on the world wide web at 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 Gambrell (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 Tomatrichitr (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
Thomson: www.thomson.com/financial
Reuters: www.knowledge.reuters.com
Bloomberg: MAC GO
Factset: <http://www.factset.com/home.aspx>
Email macresearch@macquarie.com for access

Sales

Regional Heads of Sales

Peter Slater (Boston) (1 617) 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