



INDIA

DEN IN Not rated

| | | |
|------------------------------|-------|--------------|
| Stock price as of 19/08/2011 | Rs | 42 |
| GICS sector | | Media |
| Market cap | US\$m | 121 |
| Avg Value Traded (3m) | US\$m | 0.3 |
| 12m high/low | Rs | 250/35 |
| PER FY12 | x | 11.3 |
| P/BV FY 12 | x | 0.7 |

Historical financials

| March Year End (Rs m) | 2009A | 2010A | 2011A |
|--------------------------|--------|-------|--------|
| Revenue | 7,122 | 9,103 | 10,240 |
| % growth | 529.1% | 27.8% | 12% |
| EBITDA | 93 | 808 | 994 |
| % growth | 1.3% | 8.9% | 9.7% |
| EPS | (1.67) | 2.59 | 2.9 |
| % growth | NM | NM | 12.0% |
| EBIT Margin | (0.9%) | 5.3% | 6.5% |

Source: Company data, FactSet, August 2011

Historical business risk/reward*



*Relative to the market.

Source: Macquarie Research, August 2011

Share Price Driver



Source: Macquarie Research, August 2011

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22 August 2011

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DEN Networks: Content advantage

- We met with the management of DEN Networks (DEN IN) to understand the outlook for the Indian cable players, the business drivers of the company, and its positioning vs. the offerings of other vendors.
- DEN Networks was founded in July, 2007 by Mr. Sameer Manchanda, who has over 20 years of experience in media and channel distribution.

Key differentiator: Star DEN channel distribution JV

- **JV provides content advantage.** In 2008, the company formed a JV with Star India to exclusively distribute all the broadcaster's channels to different platforms (i.e. Cable and DTH operators). This JV accounts for ~50% of the consolidated revenue but only 10% of the EBITDA given the low pass-through margins in the TV channel distribution business. This JV helps the company in its Cable business given Star's leading position in key TV genres.
- **Partnership with arch rival to address leakage.** In May 2011, Star DEN announced the formation of a 50-50 Joint Venture with Zee Turner (the TV channel distribution JV of Zee Entertainment and Turner). The arch rivals in the TV channel distribution business came together to jointly market 68 channels. The JV has been in force since July 2011 but we expect to see the financial performance of this JV only in FY13 across the ecosystem.

Dominant cable operator: potential threat from DTH

- **Large subs base but largely analogue.** DEN has about 10m subscribers across 80+ cities. Its key markets are Delhi, Uttar Pradesh and Karnataka followed by a presence in certain cities in Maharashtra (including Mumbai), Gujarat, Rajasthan, Haryana, West Bengal and Kerala. The existing subs base is largely analogue with only 700k subscribers on the digital platform.
- **Leader in LCO consolidation.** It has acquired and integrated 80+ MSOs since inception and offers digital cable in 45+ cities.

IPO cash balance: Reason for strength of expansion

- **IPO funding has strengthened the balance sheet.** DEN had its IPO in Nov 2009 and raised Rs3.6bn. The company currently has cash of Rs2bn on the balance sheet and debt of Rs1.25bn. The net cash position is sufficient to fund free set-top boxes for 0.625m subscribers.

Risks and Valuation

- **A play on digitisation but prefer DTH.** Den is riding the digitisation wave in the Indian TV distribution industry. Even so, we believe the company's growth forecasts are predicated on government strictly sticking to the analogue sunset clause. We believe DTH players that have demonstrated consumer pull are better placed than the digital cable industry in India.
- **Steep correction results in trough valuation.** Management expects FY12 EBITDA of Rs1,400m, implying an FY12E EV/EBITDA of 2.9x based on the current share price. The biggest risk to the business model is potential pressure on the carriage and placement fees that comprise ~27% of consolidated revenues.

Ownership

- Promoters – 54%

Top Shareholders:

- FII – 12%
- Corporate Bodies – 16%

Note: As of 30 June 2011.

Source: Bloomberg, NSE, August 2011

Balance sheet data and refinancing (As of end-FY10)

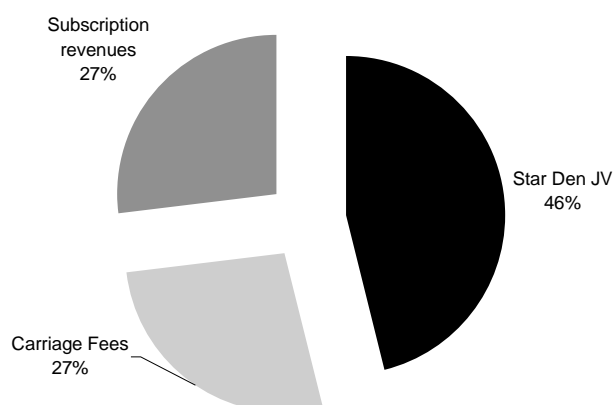
- Cash and cash equivalents: Rs2,432m
- Investments: Rs917m
- Secured Loans: Rs1,620m
- Unsecured Debt: Rs129m

Note: FY11 Annual Report has not been released

Latest Consolidated quarterly results (As of 1Q FY12)

- Revenue: Rs2.8bn (up %15 YoY)
- Operating Income: Rs947m (Down 59% YoY)
- Operating Income margin: 3.3%
- PAT: Rs29m (Down 83% YoY)
- Diluted EPS: Rs0.14 (vs Rs0.77 YoY)

Fig 1 Revenue Distribution Breakup – FY11



Source: Company Data, Macquarie Research, August, 2011

History and corporate governance

- DEN Networks was established in July 2007, reaching 10m households across 80+ cities in Delhi, Uttar Pradesh and Karnataka. It has a presence in certain cities in Maharashtra (including Mumbai), Gujarat, Rajasthan, Haryana and Kerala.
- DEN also has a 50-50 joint venture with News Corporation's Star TV group called Star DEN which is the exclusive distributor of over 25 leading channels in India.
- Auditors:** Deloitte Haskins & Sells.
- 3/7 Independent directors on the Board of Directors.

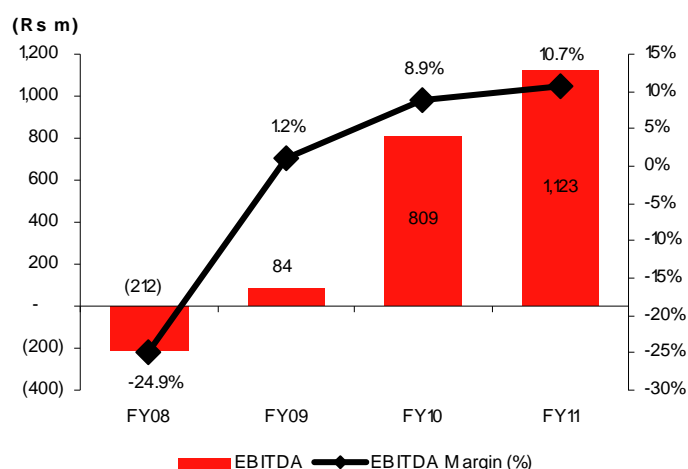
Management and Directors background

- Mr. Sameer Manchanda, Chairman & MD.** An industry veteran with over 20 yrs of experience in media & channel distribution.
- Mr. Rajesh Kaushal, CFO.** Over 13yrs of experience at PWC and Lucent.
- Mr. Navroz Behramfram, CTO.** Over 25yrs of experience. Previous stints with Tata Sky and Hathway Cable.

Latest Consolidated Annual results highlights (FY11)

- Revenue: Rs10.2bn (up 12% YoY)
- Operating Income: Rs668m (up 39% YoY)
- Operating Income margin: 6.5%
- PAT: Rs378m (up 26% YoY)
- Diluted EPS: Rs2.90 (up 12% YoY)

Fig 2 EBITDA and EBITDA Margin (%) steadily improving



Source: Company Data, Macquarie Research, August, 2011

The growth proposition

- The Indian TV distribution industry rides on the twin levers of 1) Consolidation of local cable operators and 2) Digitalization of cable.
- DEN's growth has been driven by a surge in consolidation over the last few years. DEN's affiliate count has grown to 80+ in 3 years.
- Digitalization has been the priority given the regulator's (TRAI) recommendation to convert the entire Indian TV market to digital by 2014.

The business model

- DEN drives business by consolidating local cable MSO and increasing the level of digital subscribers across the user base. The conversion of analogue subs to digital would decrease under-reporting and materially increase revenues.
- The digital subscribers can be used to up-sell other services including broadband internet, value added services, etc.

Strengths

- **Star-DEN JV.** Star DEN – the JV – has exclusive rights to distribute all Star channels and channels from other leading broadcasting houses across various distribution platforms like cable, DTH, IPTV, etc. STAR DEN is the largest content aggregator in India by revenues.
- **Focus on certain markets of Delhi, Gujarat, Karnataka.**

Opportunities

- **Analogue Cable sunset as per TRAI deadline by 2014.** The regulator has listed 2014 as the sunset date for analogue cable in India.
- **Triple Play services including Broadband.** Globally, broadband is the key revenue driver for cable operators. DEN has an all-India ISP license for providing these services.

The value proposition

Bloomberg estimates for FY3/12:

- Revenue: Rs11.8bn
- EBITDA: Rs1.5bn
- PAT: Rs480m
- EPS: Rs3.70
- FY12 PER – 11.3x

The main risks

- Failure to attract and retain digital subscribers would materially and adversely affect business.
- Continued under-reporting of analogue cable subscribers by LCOs could impact revenue growth.
- Loss of subscribers to other cable operators.

Weaknesses

- Limited ability to manage cost levers could pressure margins.
- The cable players have limited sustainable competitive advantages against DTH operators.

Threats

- **Competition from multiple players.** Rivals include Analogue cable operators; Digital cable operators and DTH players, all of which constitute the Distribution industry.
- **Price War.** The competitive intensity could increase with any further decrease in price tariffs.

Fig 3 DEN Networks – Financial Statements (Rs m)

| P&L Statements | 2008 | 2009 | 2010 | 2011 | BALANCE SHEET | 2008 | 2009 | 2010 |
|--|----------------|----------------|----------------|-------------|-------------------------------------|--------------|--------------|---------------|
| (Year Ending Mar 31) | | | | | (Year Ending Mar 31) | | | |
| Total Revenue | 1,132 | 7,122 | 9,103 | 10,240 | ASSETS | | | |
| YoY Growth (%) | NA | 529.1% | 27.8% | 12% | Cash And Equivalents | 338 | 511 | 2,432 |
| Gross Profit | 80 | 2,521 | 3,343 | 1,063 | Accounts Receivable | 486 | 1,909 | 2,656 |
| Margin % | 7.1% | 35.4% | 36.7% | 10.4% | Notes Receivable | 105 | 3 | 16 |
| EBITDA | (282) | 93 | 808 | 994 | Other Current Assets | 379 | 1,113 | 1,787 |
| Margin % | (24.9%) | 1.3% | 8.9% | 9.7% | Total Current Assets | 1,307 | 3,536 | 6,891 |
| EBIT | (298) | (67) | 482 | 668 | Gross PPE | 516 | 1,823 | 2,422 |
| Margin % | (26.3%) | (0.9%) | 5.3% | 6.5% | Accumulated Depreciation | (9) | (141) | (402) |
| Earnings from Cont. Ops. | (287) | (172) | 364 | 448 | Net PPE | 507 | 1,682 | 2,020 |
| Margin % | (25.4%) | (2.4%) | 4.0% | 4.4% | Long-term Investments | 982 | 0 | 917 |
| Net Income | (289) | (151) | 301 | 378 | Goodwill | 481 | 1,163 | 2,514 |
| Margin % | (25.5%) | (2.1%) | 3.3% | 3.7% | Other Intangibles | 20 | 123 | 382 |
| Diluted EPS Excl. Extra Items | (5.76) | (1.67) | 2.59 | 2.9 | Deferred Tax Assets, LT | 17 | 92 | 156 |
| Growth Over Prior Year | NA | NM | NM | 12.0% | Other Long-Term Assets | - | 367 | 66 |
| | | | | | Total Assets | 3,314 | 6,963 | 12,946 |
| | | | | | LIABILITIES | | | |
| | | | | | Accounts Payable | 584 | 1,703 | 2,534 |
| | | | | | Accrued Exp. | 5 | 23 | 35 |
| | | | | | Short-term Borrowings | 140 | 529 | 406 |
| CASH FLOW STATEMENT | 2008 | 2009 | 2010 | 2011 | Unearned Revenue, Current | 63 | 129 | 143 |
| (Year Ending Mar 31) | | | | | Other Current Liabilities | 446 | 1,051 | 718 |
| Net Income | (289) | (151) | 301 | Na | Total Current Liabilities | 1,245 | 3,437 | 3,837 |
| Depreciation & Amort., Total | 16 | 160 | 326 | Na | Long-Term Debt | 91 | 798 | 1,389 |
| Other Amortization | - | - | 3 | | Def. Tax Liability, Non-Current | - | 15 | 73 |
| (Gain) Loss On Sale Of Invest. | (16) | (10) | (48) | | Total Liabilities | 1,335 | 4,251 | 5,299 |
| Asset Write-down Costs | - | 7 | 1 | | Common Stock | 181 | 181 | 1,305 |
| Provision & Write-off of Bad debts | 82 | 133 | 120 | | Additional Paid In Capital | 1,722 | 2,322 | 6,105 |
| Other Operating Activities | (49) | (103) | (55) | | Pref. Stock, Convertible | 32 | 40 | - |
| Change in Other Net Operating Assets | 346 | 43 | 34 | | Minority Interest | 44 | 169 | 237 |
| Cash from Ops. | 90 | 78 | 683 | Na | Total Equity | 1,978 | 2,712 | 7,647 |
| Capital Expenditure | (593) | (1,320) | (921) | | Total Liabilities And Equity | 3,314 | 6,963 | 12,946 |
| Cash Acquisitions | (636) | (677) | (1,572) | | | | | |
| Invest. in Marketable securities. | (1,416) | 689 | (869) | | | | | |
| Net (Inc.) Dec. in Loans Originated/Sold | (140) | 102 | (12) | | | | | |
| Other Investing Activities | 4 | 20 | 149 | | | | | |
| Cash from Investing | (2,781) | (1,186) | (3,226) | Na | | | | |
| Short Term Debt Issued | 158 | 331 | 125 | | | | | |
| Long-Term Debt Issued | 105 | 719 | 591 | | | | | |
| Total Debt Issued | 263 | 1,050 | 717 | Na | | | | |
| Short Term Debt Repaid | - | (60) | (155) | | | | | |
| Long-Term Debt Repaid | (1) | (2) | (2) | | | | | |
| Total Debt Repaid | (1) | (62) | (157) | Na | | | | |
| Issuance of Common Stock | 735 | 0 | 4,395 | | | | | |
| Issuance of Pref. Stock | 2,133 | 400 | - | | | | | |
| Other Financing Activities | (8) | (107) | (489) | | | | | |
| Cash from Financing | 3,123 | 1,281 | 4,465 | Na | | | | |
| Misc. Cash Flow Adj. | 18 | - | - | | | | | |
| Net Change in Cash | 450 | 173 | 1,922 | Na | | | | |

Note: The company is yet to release its FY11 Annual Report and hence certain financial information is not available

Source: CapitalLine, NSE, August 2011

Important disclosures:

Recommendation definitions**Macquarie - Australia/New Zealand**

Outperform – return >3% in excess of benchmark return
 Neutral – return within 3% of benchmark return
 Underperform – return >3% below benchmark return

Benchmark return is determined by long term nominal GDP growth plus 12 month forward market dividend yield

Macquarie – Asia/Europe

Outperform – expected return >+10%
 Neutral – expected return from -10% to +10%
 Underperform – expected return <-10%

Macquarie First South - South Africa

Outperform – expected return >+10%
 Neutral – expected return from -10% to +10%
 Underperform – expected return <-10%

Macquarie - Canada

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

Macquarie - USA

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

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

Recommendations – 12 months

Note: Quant recommendations may differ from Fundamental Analyst recommendations

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 / 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

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

Recommendation proportions – For quarter ending 30 June 2011

| | AU/NZ | Asia | RSA | USA | CA | EUR | |
|--------------|--------|--------|--------|--------|--------|--------|---|
| Outperform | 50.37% | 64.60% | 64.62% | 45.63% | 67.74% | 48.02% | (for US coverage by MCUSA, 12.44% of stocks covered are investment banking clients) |
| Neutral | 36.86% | 21.22% | 29.23% | 51.30% | 28.50% | 38.42% | (for US coverage by MCUSA, 12.95% of stocks covered are investment banking clients) |
| Underperform | 12.77% | 14.18% | 6.15% | 3.07% | 3.76% | 13.56% | (for US coverage by MCUSA, 0.00% of stocks covered are investment banking clients) |

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Consumer and Gaming

| | |
|--------------------------------|------------------|
| Gary Pinge (Asia) | (852) 3922 3557 |
| Linda Huang (China, Hong Kong) | (852) 3922 4068 |
| Amit Mishra (India) | (9122) 6720 4084 |
| Lyll Taylor (Indonesia) | (6221) 2598 8489 |
| Toby Williams (Japan) | (813) 3512 7392 |
| HongSuk Na (Korea) | (822) 3705 8678 |
| Alex Pomento (Philippines) | (632) 857 0899 |
| Somesh Agarwal (Singapore) | (65) 6601 0840 |
| Brandon Chen (Taiwan) | (8862) 2734 7518 |
| Best Waiyanont (Thailand) | (662) 694 7993 |

Emerging Leaders

| | |
|---------------------------------|------------------|
| Jake Lynch (China, Asia) | (8621) 2412 9007 |
| Jonathan Hsu (China, Hong Kong) | (852) 3922 4625 |
| Saiyi He (Hong Kong) | (852) 3922 3585 |
| Robert Burghart (Japan) | (813) 3512 7853 |
| Makoto Egami (Japan) | (813) 3512 7879 |

Industrials

| | |
|-------------------------------|------------------|
| Janet Lewis (Asia) | (852) 3922 5417 |
| Inderjeetsingh Bhatia (India) | (9122) 6720 4087 |
| Juwon Lee (Korea) | (822) 3705 8661 |
| Sunaina Dhanuka (Malaysia) | (603) 2059 8993 |
| David Gambrell (Thailand) | (662) 694 7753 |

Insurance

| | |
|-----------------------------|-----------------|
| Scott Russell (Asia, China) | (852) 3922 3567 |
| Chung Jun Yun (Korea) | (822) 2095 7222 |

Media and Internet

| | |
|--------------------------------|------------------|
| Jiong Shao (China, Hong Kong) | (852) 3922 3566 |
| Steve Zhang (China, Hong Kong) | (852) 3922 3578 |
| Nitin Mohta (India) | (9122) 6720 4090 |
| Prem Jearajasingam (Malaysia) | (603) 2059 8989 |
| Alex Pomento (Philippines) | (632) 857 0899 |

Asia Sales

Regional Heads of Sales

| | |
|----------------------------------|------------------|
| Robin Black (Asia) | (852) 3922 2074 |
| Chris Gray (ASEAN) | (65) 6601 0288 |
| Peter Slater (Boston) | (1 617) 598 2502 |
| Jeffrey Shiu (China & Hong Kong) | (852) 3922 2061 |
| Thomas Renz (Geneva) | (41 2) 231 2507 |
| Andrew Mouat (India) | (9122) 6720 4100 |
| Kenneth Yap (Indonesia) | (6221) 515 1555 |
| JJ Kim (Korea) | (822) 3705 8799 |
| Jason Lee (Malaysia) | (603) 2059 8888 |
| Chris Gould (Malaysia) | (603) 2059 8888 |
| Gino C Rojas (Philippines) | (632) 857 0861 |
| Greg Norton-Kidd (New York) | (1 212) 231 2527 |
| Luke Sullivan (New York) | (1 212) 231 2507 |
| Eric Roles (New York) | (1 212) 231 2559 |
| Sheila Schroeder (San Francisco) | (1 415) 762 5001 |

Oil, Gas and Petrochemicals

| | |
|-----------------------------|------------------|
| James Hubbard (Asia) | (852) 3922 1226 |
| Jal Irani (India) | (9122) 6720 4080 |
| Polina Diyachkina (Japan) | (813) 3512 7886 |
| Shawn Park (Korea) | (822) 3705 8669 |
| Sunaina Dhanuka (Malaysia) | (603) 2059 8993 |
| Trevor Buchinski (Thailand) | (662) 694 7829 |

Pharmaceuticals and Healthcare

| | |
|-----------------------------------|------------------|
| Jonathan Hsu (Hong Kong) | (852) 3922 4625 |
| Abhishek Singhal (India) | (9122) 6720 4086 |
| Eunice Bu (Korea) | (822) 2095 7223 |
| Chinnarat Boonmahanark (Thailand) | (662) 694 7985 |

Property

| | |
|--------------------------------|------------------|
| Callum Bramah (Asia) | (852) 3922 4731 |
| Unmesh Sharma (India) | (9122) 6720 4092 |
| Felicia Barus (Indonesia) | (6221) 2598 8480 |
| Hiroshi Okubo (Japan) | (813) 3512 7433 |
| Sunaina Dhanuka (Malaysia) | (603) 2059 8993 |
| Alex Pomento (Philippines) | (632) 857 0899 |
| Tuck Yin Soong (Singapore) | (65) 6601 0838 |
| Elaine Cheong (Singapore) | (65) 6601 0839 |
| Corinne Jian (Taiwan) | (8862) 2734 7522 |
| Brandon Chen (Taiwan) | (8862) 2734 7518 |
| Patti Tomaitrichitr (Thailand) | (662) 694 7727 |

Resources / Metals and Mining

| | |
|-------------------------------|------------------|
| Andrew Dale (Asia) | (852) 3922 3587 |
| Graeme Train (China) | (8621) 2412 9035 |
| Peien Ji (China, Hong Kong) | (852) 3922 4741 |
| Christina Lee (Hong Kong) | (852) 3922 3571 |
| Rakesh Arora (India) | (9122) 6720 4093 |
| Adam Worthington (Indonesia) | (852) 3922 4626 |
| Polina Diyachkina (Japan) | (813) 3512 7886 |
| Chak Reungsinpinya (Thailand) | (662) 694 7982 |

Technology

| | |
|---------------------------|------------------|
| Jeffrey Su (Asia, Taiwan) | (8862) 2734 7512 |
| Lisa Soh (China) | (852) 3922 1401 |
| Nitin Mohta (India) | (9122) 6720 4090 |
| Damian Thong (Japan) | (813) 3512 7877 |
| David Gibson (Japan) | (813) 3512 7880 |
| George Chang (Japan) | (813) 3512 7854 |
| Jeff Loff (Japan) | (813) 3512 7851 |
| Michiko Kakiya (Japan) | (813) 3512 7868 |
| Yukihiro Goto (Japan) | (813) 3512 5984 |
| Daniel Kim (Korea) | (822) 3705 8641 |
| Benjamin Ban (Korea) | (822) 3705 8659 |
| Andrew Chang (Taiwan) | (8862) 2734 7526 |
| Daniel Chang (Taiwan) | (8862) 2734 7516 |
| Jimmy Hsu (Taiwan) | (8862) 2734 7533 |
| Kylie Huang (Taiwan) | (8862) 2734 7528 |

Telecoms

| | |
|--|------------------|
| Nathan Ramler (Asia) | (813) 3512 7875 |
| Lisa Soh (China, Hong Kong) | (852) 3922 1401 |
| Riaz Hyder (Indonesia) | (6221) 2598 8486 |
| Prem Jearajasingam (Malaysia, Singapore) | (603) 2059 8989 |
| Alex Pomento (Philippines) | (632) 857 0899 |
| Joseph Quinn (Taiwan) | (8862) 2734 7519 |
| Best Waiyanont (Thailand) | (662) 694 7993 |

Regional Heads of Sales cont'd

| | |
|-----------------------------|-------------------|
| Miki Edelman (Taiwan) | (8862) 2734 7580 |
| Angus Kent (Thailand) | (662) 694 7601 |
| Michael Newman (Tokyo) | (813) 3512 7920 |
| Angus Innes (UK/Europe) | (44) 20 3037 4841 |
| Rob Fabbro (UK/Europe) | (44) 20 3037 4865 |
| Sean Alexander (Generalist) | (852) 3922 2101 |

Regional Head of Distribution

| | |
|------------------------|-----------------|
| Justin Crawford (Asia) | (852) 3922 2065 |
|------------------------|-----------------|

Sales Trading

| | |
|--------------------------|-----------------|
| Adam Zaki (Asia) | (852) 3922 2002 |
| Yat Quan Tan (Hong Kong) | (852) 3922 2028 |
| Phil Sellaroli (Japan) | (813) 3512 7837 |
| Grace Lee (Korea) | (822) 3705 8601 |
| Matthew Ryan (Singapore) | (65) 6601 0288 |

Transport & Infrastructure

| | |
|-----------------------------|-----------------|
| Janet Lewis (Asia, Japan) | (852) 3922 5417 |
| Nicholas Cunningham (Japan) | (813) 3512 6044 |
| Sunaina Dhanuka (Malaysia) | (603) 2059 8993 |

Utilities & Renewables

| | |
|-------------------------------|------------------|
| Adam Worthington (Asia) | (852) 3922 4626 |
| Jeff Evans (India) | (9122) 6720 4081 |
| Prem Jearajasingam (Malaysia) | (603) 2059 8989 |
| Alex Pomento (Philippines) | (632) 857 0899 |

Commodities

| | |
|--------------|------------------|
| Jim Lennon | (4420) 3037 4271 |
| Duncan Hobbs | (4420) 3037 4497 |
| Bonnie Liu | (65) 6601 0144 |
| Graeme Train | (8621) 2412 9035 |
| Rakesh Arora | (9122) 6720 4093 |

Data Services

| | |
|----------------------|-----------------|
| Andrea Dailly (Asia) | (852) 3922 4076 |
| Eric Yeung | (852) 3922 4077 |

Economics

| | |
|--------------------------------|------------------|
| Richard Gibbs (Australia) | (612) 8232 3935 |
| Paul Cavey (China) | (852) 3922 3570 |
| Renee Chen (Hong Kong, Taiwan) | (852) 3922 3597 |
| Tanvee Gupta (India) | (9122) 6720 3455 |

Quantitative / CPG

| | |
|-------------------------|------------------|
| Gurvinder Brar (Global) | (4420) 3037 4036 |
| Viking Kwok (Asia) | (852) 3922 4735 |
| Burke Lau (Asia) | (852) 3922 5494 |
| Patrick Hansen (Japan) | (813) 3512 7876 |
| Ayumu Kuroda (Japan) | (813) 3512 7569 |
| Simon Rigney (Japan) | (813) 3512 7872 |

Strategy/Country

| | |
|----------------------------------|------------------|
| Michael Kurtz (Asia) | (852) 3922 1403 |
| Peter Eadon-Clarke (Asia, Japan) | (813) 3512 7850 |
| Jiong Shao (China, Hong Kong) | (852) 3922 3566 |
| Rakesh Arora (India) | (9122) 6720 4093 |
| Nicolaos Oentung (Indonesia) | (6121) 2598 8366 |
| David Gibson (Japan) | (813) 3512 7880 |
| Chan Hwang (Korea) | (822) 3705 8643 |
| Kieran Calder (Malaysia) | (603) 2059 8992 |
| Yeonzon Yeow (Malaysia) | (603) 2059 8982 |
| Alex Pomento (Philippines) | (632) 857 0899 |
| Conrad Werner (Singapore) | (65) 6601 0182 |
| Daniel Chang (Taiwan) | (8862) 2734 7516 |
| David Gambrell (Thailand) | (662) 694 7753 |

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Sales Trading cont'd

| | |
|------------------------------|-------------------|
| Mike Keen (Europe) | (44) 20 3037 4905 |
| Chris Reale (New York) | (1 212) 231 2555 |
| Marc Rosa (New York) | (1 212) 231 2555 |
| Stanley Dunda (Indonesia) | (6221) 515 1555 |
| Kenneth Cheung (Malaysia) | (603) 2059 8888 |
| Michael Santos (Philippines) | (632) 857 0813 |
| Isaac Huang (Taiwan) | (8862) 2734 7582 |
| Dominic Shore (Thailand) | (662) 694 7707 |

Alternative Strategies

| | |
|--------------------------------------|-----------------|
| Convertibles - Roland Sharman | (852) 3922 2095 |
| Depository Receipts - Seung-Jin Lee | (65) 6601 0203 |
| Derivatives - Mark Holland | (852) 3922 2081 |
| Structured Products - Andrew Terlich | (852) 3922 2013 |