

Company Focus

7 December 2007 | 17 pages

Aban Offshore (ABAN.BO)

Target price change ☑ Estimate change ☑

Buy: Still Some Steam Left

- Raising target We are increasing our target price to Rs5,895 from Rs3,830 as we switch to a DCF-based valuation approach. DCF, in our view, best captures the true earnings potential of Aban's assets through the whole cycle, i.e. allowing for the strong nearer-term cash flows to be tempered to factor in lower, mid-cycle earnings beyond FY10E, when Aban's earnings will peak.
- Increasing FY08-09E earnings by 1-12% We have increased our FY08E-09E earnings to factor in new contract wins as well as higher than earlier anticipated rates for some of the contracts coming up for re-pricing. We are adjusting our earnings for FY10E by 3%, from when we factor in a decline in day rates tending towards mid-cycle levels.
- Catalysts and risks Catalysts: (1) upcoming listing of the Singapore subsidiary; (2) repricing of assets (drillship Frontier Ice, semi-sub Bulford Dolphin, jackup Deep Driller; (3) asset acquisitions. Risks: (1) slowdown in offshore services growth, (2) downturn in jackup day rates, (3) delivery delays.
- Maintain Buy (1M) The outlook for the sector remains solid, with continued strength in fundamentals. Not only are rig utilisation and day rates healthy, but also the current jackups and semisubs on order account for only 19% and 27% of the global fleet levels we find manageable considering the more advanced drilling requirements of operators and the ageing global fleet. With the stock having declined ~13% from its recent highs, we maintain our rating.

| Buy/Medium Risk | 1M |
|-----------------------------|------------|
| Price (07 Dec 07) | Rs4,852.00 |
| Target price | Rs5,895.00 |
| from Rs3,830.00 | |
| Expected share price return | 21.5% |
| Expected dividend yield | 0.1% |
| Expected total return | 21.6% |
| Market Cap | Rs182,621M |
| | US\$4,633M |

| PI | ice Pertori | mance (KI | C: ABAN.BU, | RR: ARAN | IN) |
|----|-------------|-----------|-------------|----------|-----|
| | | | | | |



| Statistica | ıl Abstract | | | | | | |
|------------|-------------|-------------|------------|------|------|-------|-------|
| Year to | Net Profit | Diluted EPS | EPS growth | P/E | P/B | ROE | Yield |
| 31 Mar | (RsM) | (Rs) | (%) | (x) | (x) | (%) | (%) |
| 2006A | 715 | 18.56 | 32.4 | nm | 63.8 | 28.6 | 0.1 |
| 2007A | -502 | -13.04 | -170.3 | nm | 79.7 | -19.9 | 0.1 |
| 2008E | 4,241 | 110.11 | 944.3 | 44.1 | 28.6 | 99.5 | 0.1 |
| 2009E | 14,855 | 385.68 | 250.3 | 12.6 | 6.9 | 92.6 | 0.2 |
| 2010E | 20,024 | 519.88 | 34.8 | 9.3 | 3.9 | 56.2 | 0.2 |

See Appendix A-1 for Analyst Certification and important disclosures.

Source: Powered by dataCentral

saurabh.handa@citi.com

Rahul Singh¹
+91-22-6631-9863
rahul.r.singh@citi.com

Garima Mishra¹

garima.mishra@citi.com

Saurabh Handa¹ +91-22-6631-9858

Citi Investment Research is a division of Citigroup Global Markets Inc. (the "Firm"), which does and seeks to do business with companies covered in its research reports. As a result, investors should be aware that the Firm may have a conflict of interest that could affect the objectivity of this report. Investors should consider this report as only a single factor in making their investment decision. Non-US research analysts who have prepared this report are not registered/qualified as research analysts with the NYSE and/or NASD. Such research analysts may not be associated persons of the member organization and therefore may not be subject to the NYSE Rule 472 and NASD Rule 2711 restrictions on communications with a subject company, public appearances and trading securities held by a research analyst account. ¹Citigroup Global Markets India Private Limited

| Fiscal year end 31-Mar | 2006 | 2007 | 2008E | 2009E | 2010E |
|-----------------------------------|----------------|-----------------|---------------------------|--------------------------|--------------|
| Valuation Ratios | | | | | |
| P/E adjusted (x) | nm | nm | 44.1 | 12.6 | 9.3 |
| EV/EBITDA adjusted (x) | 68.4 | 67.9 | 17.7 | 9.1 | 7.4 |
| P/BV (x) | 63.8 | 79.7 | 28.6 | 6.9 | 3.9 |
| Dividend yield (%) | 0.1 | 0.1 | 0.1 | 0.2 | 0.2 |
| Per Share Data (Rs) | | | | | |
| EPS adjusted | 18.56 | -13.04 | 110.11 | 385.68 | 519.88 |
| EPS reported | 18.56 | -13.04 | 110.11 | 385.68 | 519.88 |
| BVPS | 76.10 | 60.86 | 169.82 | 699.11 | 1,229.49 |
| DPS | 2.60 | 3.00 | 5.00 | 8.00 | 10.00 |
| Profit & Loss (RsM) | | | | | |
| Net sales | 4,902 | 7,187 | 24,149 | 45,121 | 52,041 |
| Operating expenses | -3,112 | -4,978 | -10,093 | -16,832 | -19,445 |
| EBIT | 1,790 | 2,209 | 14,056 | 28,289 | 32,596 |
| Net interest expense | -436 | -2,686 | -7,723 | -7,773 | -6,202 |
| Non-operating/exceptionals | 148 | 881 | 420 | 296 | 386 |
| Pre-tax profit | 1,501 | 403 | 6,753 | 20,812 | 26,780 |
| Tax | -678 | -747 | -2,208 | -4,488 | -4,635 |
| Extraord./Min.Int./Pref.div. | -108 | -159 | -305 | -1,469 | -2,120 |
| Reported net income | 715 | -502 | 4,241 | 14,855 | 20,024 |
| Adjusted earnings | 715 | -502 | 4,241 | 14,855 | 20,024 |
| Adjusted EBITDA Growth Rates (%) | 2,804 | 3,474 | 16,063 | 31,383 | 36,127 |
| • • | 00.0 | 40.0 | 000.0 | 00.0 | 15.0 |
| Sales | 69.3 | 46.6 | 236.0 | 86.8 | 15.3 |
| EBIT adjusted EBITDA adjusted | 85.6 86.7 | 23.4 23.9 | 536.4 362.4 | 101.3 95.4 | 15.2 15.1 |
| EPS adjusted | 32.4 | -170.3 | 944.3 | 250.3 | 34.8 |
| Cash Flow (RsM) | JZ.4 | 170.0 | 344.0 | 200.0 | 04.0 |
| Operating cash flow | 2,295 | 2,270 | 1,975 | 18,191 | 26,843 |
| Depreciation/amortization | 1,014 | 1,266 | 2,007 | 3,095 | 3,531 |
| Net working capital | 458 | 1,200 | -4,577 | -1,227 | 1,167 |
| Investing cash flow | - 8,341 | - 35,383 | -4,377 - 24,035 | -1,227 - 5,731 | -1,960 |
| Capital expenditure | -8,341 | -35,383 | -24,035 | -5,731 | -1,960 |
| Acquisitions/disposals | 0,011 | 0 | 0 | 0,701 | 0 |
| Financing cash flow | 3,894 | 97,302 | 7,183 | -14,527 | -25,692 |
| Borrowings | 3,919 | 97,427 | 7,310 | -14,270 | -25,350 |
| Dividends paid | -109 | -130 | -216 | -346 | -432 |
| Change in cash | -2,153 | 64,189 | -14,876 | -2,067 | -810 |
| Balance Sheet (RsM) | | | | | |
| Total assets | 17,163 | 121,520 | 131,208 | 143,188 | 139,647 |
| Cash & cash equivalent | 135 | 13,264 | 3,540 | 8,315 | 7,135 |
| Accounts receivable | 699 | 2,033 | 4,280 | 6,522 | 6,820 |
| Net fixed assets | 15,466 | 49,647 | 71,738 | 74,437 | 72,929 |
| Total liabilities | 14,359 | 119,272 | 124,935 | 115,134 | 90,185 |
| Accounts payable | 771 | 4,539 | 3,242 | 5,379 | 4,692 |
| Total Debt | 12,598 | 111,585 | 118,895 | 104,625 | 79,275 |
| Shareholders' funds | 2,804 | 2,248 | 6,273 | 28,054 | 49,462 |
| Profitability/Solvency Ratios (%) | | | | | |
| EBITDA margin adjusted | 57.2 | 48.3 | 66.5 | 69.6 | 69.4 |
| ROE adjusted | 28.6 | -19.9 | 99.5 | 92.6 | 56.2 |
| ROIC adjusted | 9.0 | 2.6 | 11.0 | 19.7 | 22.9 |
| Net debt to equity | 444.4 | nm | nm | 343.3 | 145.8 |
| Total debt to capital | 81.8 | 98.0 | 95.0 | 78.9 | 61.6 |
| | | | | | |

For further data queries on Citigroup's full coverage universe please contact CIR Data Services Asia Pacific at CitiResearchDataServices@citigroup.com or +852-2501-2791



Switching to DCF valuation

We have increased our target price on Aban to Rs5,895 from Rs3,830 (based on 8x fully evolved consolidated earnings) as we switch to a DCF-based valuation methodology. The key driver for the change in our valuation methodology is that an absolute valuation better captures the future cash flows that would be generated once Aban's entire fleet of rigs and drillships is deployed and is running at full utilization, which is expected to occur in FY10, while at the same time allowing us to temper the strength in cash flows by assuming conservative terminal cash flows (beyond FY12). We realize peak earnings (in FY10E) and subsequent decline to mid-cycle levels are difficult to capture through a valuation methodology based entirely on traditional near-term forward multiples, hence our switch to DCF.

In our DCF valuation, we are assuming a terminal post-tax ROIC of 16% (12% if normalized for Aban's low tax rate) based on a 5-year payback period on the replacement cost of assets. This factors in a decline in day rates, expected to commence after 2-3 years, resulting in an EBIT decline of 28% from peak levels i.e. FY10E.

The key assumptions inherent in our DCF valuation are as follows:

- Explicit forecasts till FY12E incorporating the current contracts that Aban has already entered into and the contracts that are likely to be signed over the next few months based on the visibility in day rates. The latter include contracts for:
- 1. Drillship Frontier Ice, semi-sub Bulford Dolphin, and jackup Deep Driller 2 (likely to be signed over the next couple of months)
- 2. Jackup Aban VII (contract to end by end-FY08E)
- 3. Newbuild jackup Aban VIII (delivery expected in 1QCY08)
- 4. Newbuilds Deep Drillers 6, 7, and 8 (deliveries expected in 2HFY09)
- Steady state earnings assumed beyond FY12 such that the average payback period based on the replacement cost of assets is 5 years. This is a fairly conservative assumption, in our view, resulting in terminal EBIT being 28% lower than peak (FY10) EBIT, and considering the good track record of Aban's acquisitions (payback periods in the past have been 3-4 years). A payback period of 5 years translates into a post-tax ROIC of 16%, a fair assumption in our opinion (peak ROIC is 23% in FY10E).
- Decline in day rates over FY10-12E of 5-15% to factor in mid-cycle earnings. The result is a corresponding decline of 24% in earnings (EBIT) over FY10-12E (further 6% decline in the terminal year). Figure 1 below gives the key assumptions for our forecasts. As can be seen, the weighted average day rate per asset works out to US\$158K in the terminal year, a decline of 13% from the peak of US\$182K in FY10E.

Figure 1. Aban – Key Assumptions

| | FY08E | FY09E | FY10E | FY11E | FY12E | Terminal |
|--|-------|-------|-------|-------|-------|----------|
| No. of assets operational | 16 | 20 | 21 | 21 | 21 | 21 |
| - Aban | 9 | 10 | 10 | 10 | 10 | 10 |
| - Sinvest ¹ | 7 | 10 | 11 | 11 | 11 | 11 |
| Avg. capacity utilization | 78% | 90% | 99% | 95% | 99% | 99% |
| Weighted avg. day rate per asset ('000 US\$/day) | 108 | 165 | 182 | 167 | 159 | 158 |
| Capex (US\$m) | 760 | 198 | 50 | 52 | 52 | 45 |

Source: Citi Investment Research estimates. ¹Including semi-sub Bulford Dolphin

- Earnings to peak in FY10E when all assets are fully deployed and have been tied into contracts, with the outlook for the global day rate environment expected to remain strong for the next 12-18 months
- Terminal growth rate of 3%, in line with global GDP growth.
- WACC of 9.2% based on a cost of debt of 9.0%, cost of equity of 12.5%, target debt/equity of 1.0x, and beta of 0.75

| | FY08E | FY09E | FY10E | FY11E | FY12E | Terminal |
|-------------------------|----------|---------|---------|---------|---------|----------|
| EBIT | 14,119 | 28,352 | 32,659 | 28,006 | 24,754 | 23,374 |
| Less: Tax | (2,208) | (4,488) | (4,635) | (4,255) | (3,984) | (3,762) |
| Add: Depreciation | 1,944 | 3,032 | 3,468 | 3,625 | 3,705 | 3,705 |
| Add: Decrease in net WC | (5,153) | (2,444) | (137) | 354 | 172 | 172 |
| Less: Capex | (24,035) | (5,731) | (1,960) | (2,038) | (2,038) | (1,688) |
| Free Cash Flow to Firm | (15,332) | 18,720 | 29,394 | 25,692 | 22,609 | 21,802 |
| NPV of cash flows | | 18,316 | 26,330 | 21,068 | 16,969 | |
| Terminal Value | | , | | , | , | 240,310 |
| Total Firm value | 322,993 | | | | | |
| Less: Net Debt | 95,937 | | | | | |
| Total Equity value | 227,056 | | | | | |
| Value per share (Rs) | 5,895 | | | | | |

On our price target, Aban would trade at a P/E of 11.3x and EV/EBITDA of 8.6x FY10E, slightly above our target multiple range for global peers. We believe this is justified given the strong, better-than-anticipated day rates that Aban has managed to get for all of its recent asset placements, as well as the longer-term nature of some of these contracts. For instance, Transocean received 3-year extensions with ONGC for 2 of its rigs at day rates of US\$145K each. In contrast, Aban 3 jackups (Aban III, IV, V) were contracted at a much higher rate of US\$157K for a similar duration. Also, though day rates have displayed cyclicality in the past, market fundamentals indicate sustained strength in the current cycle for a longer duration (refer to the section titled 'Industry Outlook: Rig Utilisation High and Day Rates Firm').

Adjusting earnings estimates

We are raising our FY08-09E earnings by 12% and 1% respectively and lowering our FY10E earnings by 3% as we incorporate modest changes to our day rate assumptions.

Figure 3. Aban – Earnings Revisions

| Year to Net Profit | | fit (Rs Mils.) | | Diluted EPS (| Rs) | Div. Per | Share (Rs) |
|--------------------|--------|----------------|--------|---------------|-------|----------|------------|
| 31-Mar | Old | New | Old | New | % Chg | Old | New |
| 2008E | 3,770 | 4,241 | 97.88 | 110.11 | 12.5% | 5.0 | 5.0 |
| 2009E | 14,685 | 14,855 | 381.26 | 385.68 | 1.2% | 8.0 | 8.0 |
| 2010E | 20,680 | 20,024 | 536.90 | 519.88 | -3.2% | 10.0 | 10.0 |
| 2009E | 14,685 | 14,855 | 381.26 | 385.68 | 1.2% | 8.0 | 8.0 |

Source: Citi Investment Research estimates

The key changes are as follows:

- Aban VI repricing at US\$87K/day for a period of 6 years (vs. our assumption of US\$60K/day)
- Extension of the current contract for Aban VII till end-FY08E at the contracted day rate of US\$170K. Hence, the decline in the rate for the subsequent contract (US\$150K) that we assume does not impact FY08E earnings.
- Higher than earlier assumed day rate of US\$140K (vs. US\$100K) for Drillship Frontier Ice
- Day rate forecasts for most of Sinvest's premium jackup rigs in the US\$180-200K range (vs. US\$200-220K earlier).

Our day rate assumptions for Aban's assets are shown in Figure 4 below.

Figure 4. Day Rate Assumptions for Aban's Assets (US\$'000)

| Asset | Contract validity | Client | Location | FY08E | FY09E | FY10E | FY11E | FY12E |
|---|-------------------|---------------------|-----------------|---------|---------|---------|---------|---------|
| Jack-up — Aban II | May-10 | ONGC | East Coast | \$85.0 | \$85.0 | \$85.0 | \$75.0 | \$75.0 |
| Jack-up — Aban III | Jan-11 | ONGC | Mumbai High | \$72.8 | \$156.6 | \$156.6 | \$156.6 | \$145.0 |
| Jack-up — Aban IV | Nov-10 | ONGC | Mumbai High | \$88.6 | \$156.6 | \$156.6 | \$156.6 | \$145.0 |
| Jack-up — Aban V | Jan-11 | ONGC | Mumbai High | \$71.9 | \$156.6 | \$156.6 | \$156.6 | \$145.0 |
| Jack-up — Aban VI | 0ct-13 | Oriental Oil | Dubai | \$63.7 | \$87.4 | \$87.4 | \$87.4 | \$87.4 |
| FPU — TAHARA | Jul-09 | Hardy Oil | East Coast | \$71.4 | \$87.5 | \$84.4 | \$75.0 | \$75.0 |
| DRILL SHIP — FRONTIER ICE | Mar-08 | ONGC | Mumbai High | \$108.3 | \$140.0 | \$140.0 | \$130.0 | \$130.0 |
| Jack-up — Aban VII (ROWAN TEXAS) | Mar-08 | OVL | Qatar | \$168.3 | \$150.0 | \$150.0 | \$140.0 | \$140.0 |
| DRILL SHIP — Aban Abraham | Jun-09 | Kosmos Energy | West Africa | \$325.0 | \$388.8 | \$410.0 | \$350.0 | \$350.0 |
| Jack-up — Aban VIII | Q108* | | | - | \$190.0 | \$190.0 | \$175.0 | \$175.0 |
| Jack-up — Deep Driller 1 | May-09 | GSPC | India | \$191.8 | \$190.0 | \$190.0 | \$190.0 | \$180.0 |
| Jack-up — Deep Driller 2 | To be repri | ced in the next few | months | \$195.0 | \$190.0 | \$190.0 | \$190.0 | \$180.0 |
| Jack-up — Deep Driller 3 | May-08 | Petronas | Malaysia | \$197.5 | \$220.0 | \$220.0 | \$220.0 | \$200.0 |
| Jack-up — Deep Driller 4 | Dec-08 | NA | South Asia | \$220.0 | \$220.0 | \$200.0 | \$200.0 | \$185.0 |
| Jack-up — Deep Driller 5 | Mar-08 | Cairn | Bangladesh | \$200.0 | \$200.0 | \$190.0 | \$190.0 | \$180.0 |
| Jack-up — Deep Driller 6 | Q308* | | | - | \$180.0 | \$180.0 | \$180.0 | \$175.0 |
| Jack-up — Deep Driller 7 | Q308* | | | - | \$190.0 | \$190.0 | \$190.0 | \$180.0 |
| Jack-up — Deep Driller 8 | Q109* | | | - | - | \$185.0 | \$185.0 | \$175.0 |
| Bulford Dolphin | To be | contracted in the | next few months | \$275.0 | \$275.0 | \$275.0 | \$250.0 | \$250.0 |
| Jack-up — Murmanskya" | Mar-08 | ROC OIL | China | \$215.0 | \$200.0 | \$200.0 | \$200.0 | - |
| Drillship "Deep Venture" (50% stake) | Nov-08 | Exxon Mobil | West Africa | \$410.0 | \$410.0 | \$410.0 | \$350.0 | \$350.0 |
| Source: Company reports and Citi Investment Research. *Delivery dates for assets under construction/purchased | | | | | | | | |

Possible valuations for Aban Singapore support our fair value

Recent media reports (*Indian Express*) suggest that Aban could raise anywhere between US\$450m-500m by divesting a 10-15% stake in Aban Singapore. Including the 10.4% dilution following conversion of bonds held by outside stakeholders in Aban Singapore, this would result in Aban Offshore's holding coming down to ~75-80%. Figure 5 below shows the sensitivity of value accretion to Aban Offshore to the possible valuations that Aban Singapore may achieve on listing.

| Figure 5. Aban Singapore – Valuation Scenarios | | | |
|---|------------|-------------|--------------|
| US\$m | Scenario I | Scenario II | Scenario III |
| Money raised through listing of Aban Singapore | 500 | 500 | 500 |
| Stake dilution | 15% | 12% | 10% |
| Implied market value of Aban Singapore — (1) | 3,333 | 4,167 | 5,000 |
| FY09E net debt of Aban Singapore — (2) | 2,371 | 2,371 | 2,371 |
| Implied EV of Aban Singapore $-(3)=(1)+(2)$ | 5,704 | 6,537 | 7,371 |
| FY10E EBITDA of Aban Singapore (4) | 716 | 716 | 716 |
| Implied EV/EBITDA (FY10E) of Aban Singapore — (3)/(4) | 8.0 | 9.1 | 10.3 |
| Implied PE (FY10E) of Aban Singapore | 7.6 | 9.5 | 11.4 |
| FY10E EBITDA of Aban India | 210 | | |
| EV/EBITDA | 7.5 | | |
| EV of Aban India — (5) | 1,574 | 1,574 | 1,574 |
| Post-stake sale and dilution | | | |
| Aban's interest in Aban Singapore* — (6) | 74.6% | 77.6% | 79.6% |
| EV of Aban consol $-(7) = (5)+(3)*(6)$ | 5,831 | 6,649 | 7,443 |
| FY09E net debt of Aban consol — (8) | 1,850 | 1,850 | 1,850 |
| Implied mkt. cap of Aban consol — (7)-(8) | 3,981 | 4,799 | 5,593 |
| Implied price (Rs/share) | 4,159 | 5,013 | 5,843 |
| Aban's current market cap | 4,664 | 4,664 | 4,664 |
| Upside from current market cap | -15% | 3% | 20% |

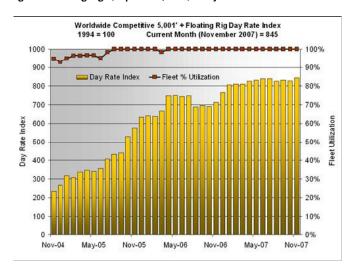
Source: Citi Investment Research estimates. *Including 10.4% additional dilution following conversion of bonds.

Industry Outlook: Rig Utilisation High and Day Rates Firm

The following is extracted from "Singapore Conglomerates: 2008 Outlook: Still Robust but Risk Appetite Scaled Back" dated 4 Dec 2007

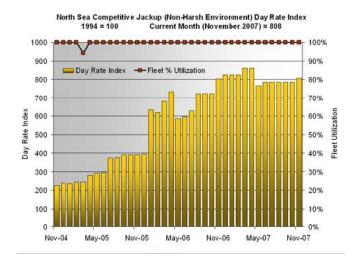
According to ODS-Petrodata's Offshore Rig Day Rate Index, deepwater drilling rig day rates are at record highs across rig types and geographical locations, except Gulf of Mexico day rates which continue to weaken. Fleet utilisation is at or close to 100% except for the Gulf of Mexico.

Figure 6. Floating Rigs (Depths > 5,000ft) - Day Rates and Utilisation



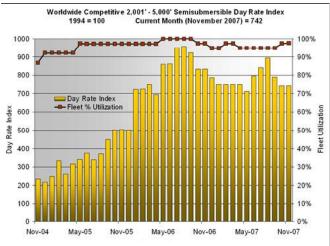
Source: ODS-Petrodata

Figure 8. North Sea Competitive Jackups – Day Rates and Utilisation



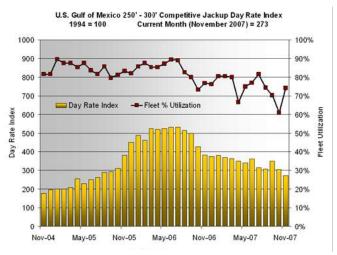
Source: ODS-Petrodata

Figure 7. Floating Rigs (Depths 2001-5,000ft) - Day Rates and Utilisation



Source: ODS-Petrodata

Figure 9. U.S. Gulf of Mexico Competitive Jackups - Day Rates and Utilisation



Source: ODS-Petrodata

The following are extracted from "Avoiding a Rush to Judgment: Fears of a Collapse in International Jackup Rates Are Premature" dated 17 Sep 2007; "Offshore Drilling 3Q07 Preview: Divergence Continues" dated 14 Oct 2007; and "Diamond Offshore Drilling Inc (DO): Sharing the Wealth" dated 25 Oct 2007 by our US Oilfield Equipment & Services analyst Geoff Kieburtz.

Our optimistic outlook is further buoyed by recent contracts received by several speculative jackups prior to exiting the shipyard. Petrobras recently agreed to a two-year contract for jackup Offshore Defender that begins in first quarter 2008 at a day rate of \$185,000. Premier has contracted jackup WilBoss for six months in second quarter 2008 at a \$220,000 day rate. Day rates are likely to

remain at current levels rather than decline precipitously over the next several quarters as additional capacity is absorbed.

Delivered rigs have been receiving contracts at market rates. ODS-Petrodata shows that 18 jackups have been delivered between Sep 06 to Sep 07. Three are owner-operated, i.e. non-competitive. All of the remaining 15 rigs are contracted. Of these 15, 12 can be classified as speculative (no contract prior to beginning construction). The day rates for the 12 speculative rigs range from a low of US\$165,000 to a high of \$255,000, which is within the range of day rates received by existing rigs over the past year.

Diamond sees the potential for another step-up in day rates. Diamond's outlook for day rates is perhaps more bullish than ours for we continue to assume that today's leading edge day rates will still be the leading edge in the 2008-2010 time frame. As new builds consistently receive commitments at day rates well in excess of \$500,000, the gap between these rigs and the existing worldwide fleet will continue to tighten, in Diamond's view, as it has done over the past several quarters. Midwater day rates should continue to benefit from tightness in the deepwater market and growing activity in international markets in water depths of 2,000'-3,000' that remain largely unexplored.

New Builds are Manageable

The current jackup and semisub rigs on order only account for 19% and 27% of the global fleet respectively – levels we find manageable considering the advanced drilling requirements of operators and the ageing global fleet.

Figure 10. New Builds are Manageable

| | Jac | ckup | Semi-Sub | |
|--------------------------------------|-----|------|----------|------|
| Global Fleet | 413 | 100% | 165 | 100% |
| Delivery (of global fleet) | | | | |
| 2007 | 10 | 2% | 2 | 1% |
| 2008 | 29 | 7% | 11 | 6% |
| 2009 | 23 | 6% | 21 | 13% |
| 2010 | 13 | 3% | 10 | 5% |
| 2011 | 3 | 1% | 1 | 1% |
| Under Construction (of global fleet) | 78 | 19% | 45 | 27% |
| Keppel Corp (of total under const.) | 29 | 37% | 10 | 22% |
| SembMarine (of total under const.) | 17 | 22% | 8 | 18% |

Source: ODS-Petrodata, Rigzone, Citi Investment Research

Delays May Provide Support to Day Rates

Rig supply may expand more slowly than anticipated due to strains evident in the newbuild supply chain, which should provide support to day rates.

The following is extracted from "Noble Corp (NE): Eye on the Ball" dated 18 October 2007 by our US Oilfield Equipment & Services analyst Geoff Kieburtz.

Noble is experiencing shipyard delays, others may as well. Delivery dates for Noble's two jackups under construction, *Noble Hans Deul* and *Noble Scott Marks*, have been pushed back by five months and three months, respectively.

Noble has a reputation for delivering rigs on time and within budget, so the fact that it is experiencing delays suggests that other contractors may be as well, particularly speculative contractors with little rig construction experience.

In our recent tour of shipyards in Asia, we heard numerous comments about the strains evident in the newbuild supply chain. Several contractors are now adding a one- to three-month delay to the scheduled delivery dates for planning purposes. Noble's delays were apparently caused by defective workmanship on the fabrication of legs completed in the U.S. We heard similar problems have been experienced on other contractors' projects in Singapore.

As a result, rig supply will likely expand more slowly than anticipated, which should provide support to day rates. If jackup delivery delays average three months per rig, the number of jackups scheduled for delivery over the next 12 months falls to 24 from 32. Considering only jackups without contracts, the number of deliveries falls to 15 from 21.

Ageing Global Fleet and Safety Risk

The global rig fleet (jackups and semisubs) continues to age with 83% of the total above 20 yrs old. We believe part of the fleet will be replaced and recent news on the dangers of these old assets may prompt further investments to replace the existing fleet.

In a recent Upstream article, the UK government has claimed that UK's offshore oil and gas infrastructure is old, decaying and neglected by an industry that does not understand the potential dangers. Most of the UK's North Sea oil and gas assets are near or beyond the end of their intended design life and not getting the attention they need to keep operating safely in their twilight years, according to the Health & Safety Executive (HSE). "There is a poor understanding across the industry of potential impact of degraded, non safety-critical plant and utility systems on safety-critical elements in the event of a major accident," the HSE said after inspecting nearly 100 offshore installations - about 40% of the total.

According to the same article, more than half of the offshore assets studied in the three-year investigation - including fixed manned and unattended platforms, floating production, storage and offloading vessels and mobile drilling rigs - were found to be in a poor condition. The HSE warned that the poor state of equipment was harming morale in an offshore energy sector already struggling to attract enough skilled labour and called on companies to cooperate more effectively.

Figure 11. Jackups - Age Profile

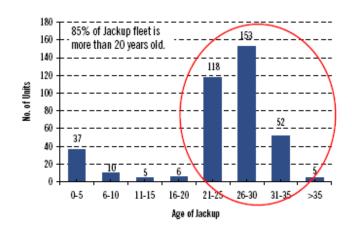
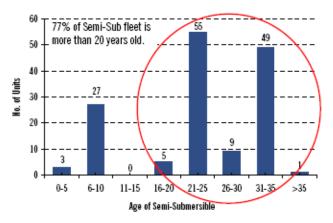


Figure 12. Semi-Submersibles - Age Profile



Source: ODS-Petrodata Source: ODS-Petrodata

Jackup and Semisub Markets

The following are extracted from "Offshore Drilling 3Q07 Preview: Divergence Continues" dated 14 Oct 07; "Noble Corp (NE): Eye on the Ball" dated 18 Oct 07; "Diamond Offshore Drilling Inc (DO): Sharing the Wealth" dated 25 Oct 07; "Ensco International Inc (ESV): Engineering Growth" dated 25 Oct 07; "Hercules Offshore Inc (HERO): Emerging from the Gulf" dated 30 Oct 07; "Transocean Inc (RIG): Moving to the Next Level" dated 31 Oct 07; and "Pride International Inc (PDE): Unfamiliar Ground" dated 1 Nov 07 by our US Oilfield Equipment & Services analyst Geoff Kieburtz.

Jackup

Substantial unsatisfied international jackup demand exists. According to ODS-Petrodata (private), more than 180 jackups may be needed to fulfill drilling programs outside the U.S. Gulf of Mexico slated to begin over the next 12 months. This exceeds the approximately 135 international jackups expected to have availability during the same period. Even after including 16 jackups under construction that will be available through October 2008, demand is forecasted to outstrip supply by close to 30 units.

The concern among investors is on the supply side and the fear that an influx of new capacity over the next 3+ years will dampen day rates. As we note below, it appears at this time that there is sufficient demand to absorb new construction without pushing rates lower. The current jackup supply and demand figures outside the U.S. Gulf of Mexico are 330 and 320, respectively, resulting in utilization of 97%. Of the 80 jackups under construction, 60 are without a contract. Assuming a worst case scenario that none of these jackups are contracted upon exiting the shipyard, supply and demand would be 410 and 340, with utilization of 83%. If we were to assume that half of the 60 jackups under construction without contracts remain idle after delivery, demand would be 370 rigs and utilization would be 90%.

All international jackup markets appear undersupplied. ENSCO believes that there is a need for five incremental jackups in Saudi Arabia by early 2008, and deficits exist in the Neutral Zone, U.A.E., Iran, India, Mediterranean, West Africa, the North Sea, and Mexico. Mexico is a new market for ENSCO, as the company will contract its first jackup with Pemex (private) under a 2.5-year commitment beginning in December 2007 at a day rate in the mid-\$160,000s, or approximately twice the day rate it would likely earn in the fourth quarter if it were to remain in the U.S.

In particular, Noble highlighted incremental jackup needs in Mexico, West Africa, the Middle East, Southeast Asia, and Brazil. The North Sea is currently in balance but could be short capacity by mid-2008 as at least three rigs are expected to leave the region for work in other markets. This supply deficit is unlikely to be satisfied by units under construction without contracts because the vast majority of these rigs are not being outfitted for work in harsh environments. This is a positive for Noble as it has five jackups in the region that will be ending current commitments prior to the end of the third quarter.

The rise of indigenous drilling contractors in India is one area of concern as it appears they are willing to accept below-market rates as they build competency, which could pressure day rates for non-Indian contractors with a presence in the region. Noble's exposure to India is limited to two units, one of which is contracted through July 2009 and the other until January 2010.

Transocean is "pleasantly surprised" by the international jackup market but cautioned that visibility is limited to first half 2008. Demand is growing rapidly in the Middle East, where Saudi Aramco may need as many as 20 incremental jackups over the next few years, and India, supplemented by more gradual demand increases in more mature jackup markets. Transocean remains concerned about new building activity but has been so for the past two years, even as the market has remained robust. The jackup market is naturally shorter-term than the deepwater market so forward visibility is fairly limited. Nevertheless, as we have noted numerous times, it appears at this time as if there is sufficient incremental demand to absorb rigs under construction without resulting in a significant decline in day rates.

Semisub

The floating rig market remains the most attractive offshore drilling sector, in our view, and appears poised to remain so as demand is far outstripping supply even after accounting for new builds under construction. Essentially all currently active floaters are contracted and day rates remain at record levels. Notably, drillship Stena DrillMax III, which was built on speculation, recently received a five-year, \$520,000 commitment for work beginning in July 2009.

GlobalSantaFe's recent announcement that it would undertake a \$740 million drillship newbuild program, with delivery in third quarter 2010, without a contract in hand is the latest sign of market tightness. The company indicated that assuming no new discoveries there will be a 40-50 deepwater rig shortage in 2010. Pride International is also constructing two drillships on speculation, with deliveries scheduled in 2010. The decision to go forward with construction on speculation is a reflection of tight shipyard and vendor capacity, which has

resulted in construction options that move faster than customers' tender processes.

Recent data points appear to support GlobalSantaFe's and Pride's view of a constrained floating rig market. Open demand for floaters in 2008 alone could be approximately 45 rig years, according to ODS-Petrodata, while availability is estimated to be just 25 years, assuming options to extend contracts are exercised. This supply/demand imbalance should ensure continued high rig utilization and robust day rates, in our view.

Pride is noting customer inquiries for long-term contracts beginning as far out as 2010. The company is currently in discussions with one operator for its 10,000' drillship *Pride Angola*, which ends its current contract in June 2008. Pride would not disclose day rate discussions but, as we have seen with other recent signings, operators appear willing to pay a significant premium to leading-edge term rates in order to secure near-term access. In our view, a day rate approaching \$500,000 is not out of the question in light of the company's expectation that Pride South Pacific, a 6,500' water depth semi, will receive a day rate competitive with the \$450,000 day rate recently secured by a competitor's similarly equipped rig.

Aban Offshore

Company description

Aban Offshore, the flagship company of the Aban group, was established in 1986 as an Indo-US joint venture in offshore drilling. The company was set up as Aban Lloyd Chiles Offshore by M.A. Abraham in collaboration with Chiles Offshore Inc. (a drilling company based in the US which has now merged with Ensco). Aban Offshore is the largest offshore oilfield service provider in the private sector in India. With the purchase of the Norwegian company Sinvest and the recent acquisition of a semi-submersible rig, the consolidated entity has 21 offshore drilling assets (including 2 bare boat charters) and one FPU. While Aban's primary area of operation is the drilling and oilfield services sector, it is also engaged in power generation through renewable energy (windmills).

Investment strategy

We rate Aban Buy/Medium Risk. Consolidated with Sinvest, Aban is a material play on the global offshore services industry with a pipeline of 5 assets (4 new jackups and 1 recently acquired semi-submersible rig), which come on stream over CY08-09 (adding to an existing fleet of 16 offshore assets). This well-timed fleet expansion will help Aban capitalize on the strong cyclical uptrend in the offshore drilling industry. Strong operational cashflows will help Aban service and pay-down part of its large debt over the next three years. We see repricing of assets, upcoming listing of the Singapore subsidiary, and growth in earnings as key share-price drivers.

Valuation

Our target price for Aban of Rs5,895 is based on our DCF fair value for Dec-08E. Our DCF is based on 5 years of explicit cash flow forecasts and the following key assumptions: decline in day rates over FY10-12E of 5-15% to factor in mid-cycle earnings; steady state earnings assumed beyond FY12 based on a payback period of 5 years; terminal EBIT being 28% lower than peak (FY10) EBIT; terminal post-tax ROIC of 16% (vs. peak ROIC of 23% in FY10E); WACC of 9.2% (risk free of 8%, risk premium of 6%, beta of 0.75x, target D/E of 1:1). On our target price, Aban would trade at ~11x FY10E earnings, by which time all the assets of the company, existing as well as in the pipeline, would contribute fully to earnings.

Risks

We rate Aban as Medium Risk, in line with our quantitative risk-rating system, which tracks 260-day historical share-price volatility. Key risks that could prevent the shares reaching our target are: E&P activity decline; long-term day rates which vary with the demand-supply scenario in the rest of the world; delay in completing shipyard work could result in jack-ups going on day rates later than expected, which could result in lower than expected earnings; higher-than-anticipated shipyard costs; and currency fluctuations.

Appendix A-1

Analyst Certification

Each research analyst(s), strategist(s) or research associate(s) responsible for the preparation and content of this research report hereby certifies that, with respect to each issuer or security that the research analyst, strategist or research associate covers in this research report, all of the views expressed in this research report accurately reflect their personal views about those issuer(s) or securities. Each research analyst(s) strategist(s) or research associate(s) also certify that no part of their compensation was, is, or will be, directly or indirectly, related to the specific recommendation(s) or view(s) expressed by that research analyst, strategist or research associate in this research report.

IMPORTANT DISCLOSURES

Aban Offshore (ABAN.BO) Ratings and Target Price History - Fundamental Research Target Closing Analyst: Saurabh Handa (covered since June 6 2007) Date Price Price 740 00 584 95 5 .lan 06 Feb 06 Mar 06 May 06 Apr 07 1M 1M 1M 754.00 1,012.05 1,345.85 *995.00 ,250.00 2: 3: 4: 5: 6: 12 Mar 06 7 May 06 3 Apr 07 13 Aug 07 5,000 1,700.00 *2,850.00 *3,530.00 2.849.40 4,000 17 Sep 07 3,830.00 *Indicates change 9 N D J F M A M J J A S O N D J F M A M J J A S O N D J F M A M J J A S O N 2005 Covered Rating/target price changes above reflect Eastern Standard Time Not covered

Citigroup Global Markets Inc. or an affiliate received compensation for products and services other than investment banking services from Aban Offshore in the past 12 months.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following company(ies) as clients, and the services provided were non-investment-banking, securities-related: Aban Offshore.

Citigroup Global Markets Inc. currently has, or had within the past 12 months, the following company(ies) as clients, and the services provided were non-investment-banking, non-securities-related: Aban Offshore.

Analysts' compensation is determined based upon activities and services intended to benefit the investor clients of Citigroup Global Markets Inc. and its affiliates ("the Firm"). Like all Firm employees, analysts receive compensation that is impacted by overall firm profitability, which includes revenues from, among other business units, the Private Client Division, Institutional Sales and Trading, and Investment Banking.

For important disclosures (including copies of historical disclosures) regarding the companies that are the subject of this Citi Investment Research product ("the Product"), please contact Citi Investment Research, 388 Greenwich Street, 29th Floor, New York, NY, 10013, Attention: Legal/Compliance. In addition, the same important disclosures, with the exception of the Valuation and Risk assessments and historical disclosures, are contained on the Firm's disclosure website at www.citigroupgeo.com. Private Client Division clients should refer to www.smithbarney.com/research. Valuation and Risk assessments can be found in the text of the most recent research note/report regarding the subject company. Historical disclosures (for up to the past three years) will be provided upon request.

| Citi Investment Research Ratings Distribution | | | | | | |
|--|-----|------|------|--|--|--|
| Data current as of 30 September 2007 | Buy | Hold | Sell | | | |
| Citi Investment Research Global Fundamental Coverage (3358) | 50% | 38% | 12% | | | |
| % of companies in each rating category that are investment banking clients | 53% | 55% | 42% | | | |

Guide to Fundamental Research Investment Ratings:

Citi Investment Research's stock recommendations include a risk rating and an investment rating.

Risk ratings, which take into account both price volatility and fundamental criteria, are: Low (L), Medium (M), High (H), and Speculative (S).

Investment ratings are a function of Citi Investment Research's expectation of total return (forecast price appreciation and dividend yield within the next 12 months) and risk rating.

For securities in emerging markets (Asia Pacific, Emerging Europe/Middle East/Africa, and Latin America), investment ratings are: Buy (1) (expected total return of 15% or more for Low-Risk stocks, 20% or more for Medium-Risk stocks, 30% or more for High-Risk stocks, and 40% or more for Speculative stocks); Hold (2) (5%-15% for Low-Risk stocks, 10%-20% for Medium-Risk stocks, 15%-30% for High-Risk stocks, and 20%-40% for Speculative stocks); and Sell (3) (5% or less for Low-Risk stocks, 10% or less for Medium-Risk stocks, 15% or less for High-Risk stocks, and 20% or less for Speculative stocks).

Investment ratings are determined by the ranges described above at the time of initiation of coverage, a change in investment and/or risk rating, or a change in target price (subject to limited management discretion). At other times, the expected total returns may fall outside of these ranges because of market price movements and/or

7 December 2007

other short-term volatility or trading patterns. Such interim deviations from specified ranges will be permitted but will become subject to review by Research Management. Your decision to buy or sell a security should be based upon your personal investment objectives and should be made only after evaluating the stock's expected performance and risk.

Guide to Corporate Bond Research Credit Opinions and Investment Ratings:

Citi Investment Research's corporate bond research issuer publications include a fundamental credit opinion of Improving, Stable or Deteriorating and a complementary risk rating of Low (L), Medium (M), High (H) or Speculative (S) regarding the credit risk of the company featured in the report. The fundamental credit opinion reflects the CIR analyst's opinion of the direction of credit fundamentals of the issuer without respect to securities market vagaries. The fundamental credit opinion is not geared to, but should be viewed in the context of debt ratings issued by major public debt ratings companies such as Moody's Investors Service, Standard and Poor's, and Fitch Ratings. CBR risk ratings are approximately equivalent to the following matrix: Low Risk Triple A to Low Double A; Low to Medium Risk High Single A through High Triple B; Medium to High Risk Mid Triple B through High Double B; High to Speculative Risk Mid Double B and Below. The risk rating element illustrates the analyst's opinion of the relative likelihood of loss of principal when a fixed income security issued by a company is held to maturity, based upon both fundamental and market risk factors. Certain reports published by Citi Investment Research will also include investment ratings on specific issues of companies under coverage which have been assigned fundamental credit opinions and risk ratings. Investment ratings are a function of Citi Investment Research's expectations for total return, relative return (to publicly available Citigroup bond indices performance), and risk rating. These investment ratings are: Buy/Overweight the bond is expected to outperform the relevant Citigroup bond market sector index (Broad Investment Grade, High Yield Market or Emerging Market), performances of which are updated monthly and can be viewed at http://sd.ny.ssmb.com/ using the "Indexes" tab; Hold/Neutral Weight the bond is expected to perform in line with the relevant Citigroup bond market sector index; or Sell/Underweight the bond is expected to underper

OTHER DISCLOSURES

The subject company's share price set out on the front page of this Product is quoted as at 07 December 2007 01:09 PM on the issuer's primary market.

For securities recommended in the Product in which the Firm is not a market maker, the Firm is a liquidity provider in the issuers' financial instruments and may act as principal in connection with such transactions. The Firm is a regular issuer of traded financial instruments linked to securities that may have been recommended in the Product. The Firm regularly trades in the securities of the subject company(ies) discussed in the Product. The Firm may engage in securities transactions in a manner inconsistent with the Product and, with respect to securities covered by the Product, will buy or sell from customers on a principal basis.

Securities recommended, offered, or sold by the Firm: (i) are not insured by the Federal Deposit Insurance Corporation; (ii) are not deposits or other obligations of any insured depository institution (including Citibank); and (iii) are subject to investment risks, including the possible loss of the principal amount invested. Although information has been obtained from and is based upon sources that the Firm believes to be reliable, we do not guarantee its accuracy and it may be incomplete and condensed. Note, however, that the Firm has taken all reasonable steps to determine the accuracy and completeness of the disclosures made in the Important Disclosures section of the Product. The Firm's research department has received assistance from the subject company(ies) referred to in this Product including, but not limited to, discussions with management of the subject company(ies). Firm policy prohibits research analysts from sending draft research to subject companies. However, it should be presumed that the author of the Product has had discussions with the subject company to ensure factual accuracy prior to publication. All opinions, projections and estimates constitute the judgment of the author as of the date of the Product and these, plus any other information contained in the Product, are subject to change without notice. Prices and availability of financial instruments also are subject to change without notice. Notwithstanding other departments within the Firm advising the companies discussed in this Product, information obtained in such role is not used in the preparation of the Product. Although Citi Investment Research does not set a predetermined frequency for publication, if the Product is a fundamental research report, it is the intention of Citi Investment Research to provide research coverage of the/those issuer(s) mentioned therein, including in response to news affecting this issuer, subject to applicable quiet periods and capacity constraints. The Product is for informational purposes only and is

Investing in non-U.S. securities, including ADRs, may entail certain risks. The securities of non-U.S. issuers may not be registered with, nor be subject to the reporting requirements of the U.S. Securities and Exchange Commission. There may be limited information available on foreign securities. Foreign companies are generally not subject to uniform audit and reporting standards, practices and requirements comparable to those in the U.S. Securities of some foreign companies may be less liquid and their prices more volatile than securities of comparable U.S. companies. In addition, exchange rate movements may have an adverse effect on the value of an investment in a foreign stock and its corresponding dividend payment for U.S. investors. Net dividends to ADR investors are estimated, using withholding tax rates conventions, deemed accurate, but investors are urged to consult their tax advisor for exact dividend computations. Investors who have received the Product from the Firm may be prohibited in certain states or other jurisdictions from purchasing securities mentioned in the Product from the Firm. Please ask your Financial Consultant for additional details. Citigroup Global Markets Inc. takes responsibility for the Product in the United States. Any orders by US investors resulting from the information contained in the Product may be placed only through Citigroup Global Markets Inc.

The Citigroup legal entity that takes responsibility for the production of the Product is the legal entity which the first named author is employed by. The Product is made available in Australia to wholesale clients through Citigroup Global Markets Australia Pty Ltd. (ABN 64 003 114 832 and AFSL No. 240992) and to retail clients through Citi Smith Barney Pty Ltd. (ABN 19 009 145 555 and AFSL No. 240813), Participants of the ASX Group and regulated by the Australian Securities & Investments Commission. Citigroup Centre, 2 Park Street, Sydney, NSW 2000. The Product is made available in Australia to Private Banking wholesale clients through Citigroup Pty Limited (ABN 88 004 325 080 and AFSL 238098). Citigroup Pty Limited provides all financial product advice to Australian Private Banking wholesale clients through bankers and relationship managers. If there is any doubt about the suitability of investments held in Citigroup Private Bank accounts, investors should contact the Citigroup Private Bank in Australia. Citigroup companies may compensate affiliates and their representatives for providing products and services to clients. The Product is made available in Brazil by Citigroup Global Markets Brasil - CCTVM SA, which is regulated by CVM - Comissão de Valores Mobiliários, BACEN - Brazilian Central Bank, APIMEC - Associação Associação dos Analistas e Profissionais de Investimento do Mercado de Capitais and ANBID - Associação Nacional dos Bancos de Investimento. Av. Paulista, 1111 - 11º andar - CEP. 01311920 - São Paulo - SP. If the Product is being made available in certain provinces of Canada by Citigroup Global Markets (Canada) Inc. ("CGM Canada"), CGM Canada has approved the Product. Citigroup Place, 123 Front Street West, Suite 1100, Toronto, Ontario M5J 2M3. The Product may not be distributed to private clients in Germany. The Product is distributed in Germany by Citigroup Global Markets Deutschland AG & Co. KGaA, which is regulated by Bundesanstalt fuer Finanzdienstleistungsaufsicht (BaFin). Frankfurt am Main, Reuterweg 16, 60323 Frankfurt am Main. If the Product is made available in Hong Kong by, or on behalf of, Citigroup Global Markets Asia Ltd., it is attributable to Citigroup Global Markets Asia Ltd., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. Citigroup Global Markets Asia Ltd. is regulated by Hong Kong Securities and Futures Commission. If the Product is made available in Hong Kong by The Citigroup Private Bank to its clients, it is attributable to Citibank N.A., Citibank Tower, Citibank Plaza, 3 Garden Road, Hong Kong. The Citigroup Private Bank and Citibank N.A. is regulated

by the Hong Kong Monetary Authority. The Product is made available in India by Citigroup Global Markets India Private Limited, which is regulated by Securities and Exchange Board of India. Bakhtawar, Nariman Point, Mumbai 400-021. The Product is made available in Indonesia through PT Citigroup Securities Indonesia. 5/F, Citibank Tower, Bapindo Plaza, Jl. Jend. Sudirman Kav. 54-55, Jakarta 12190. Neither this Product nor any copy hereof may be distributed in Indonesia or to any Indonesian citizens wherever they are domiciled or to Indonesian residents except in compliance with applicable capital market laws and regulations. This Product is not an offer of securities in Indonesia. The securities referred to in this Product have not been registered with the Capital Market and Financial Institutions Supervisory Agency (BAPEPAM-LK) pursuant to relevant capital market laws and regulations, and may not be offered or sold within the territory of the Republic of Indonesia or to Indonesian citizens through a public offering or in circumstances which constitute an offer within the meaning of the Indonesian capital market laws and regulations. If the Product was prepared by Citi Investment Research and distributed in Japan by Nikko Citigroup Limited ("NCL"), it is being so distributed under license. If the Product was prepared by NCL and distributed by Nikko Cordial Securities Inc. or Citigroup Global Markets Inc. it is being so distributed under license. NCL is regulated by Financial Services Agency, Securities and Exchange Surveillance Commission, Japan Securities Dealers Association, Tokyo Stock Exchange and Osaka Securities Exchange. Shin-Marunouchi Building, 1-5-1 Marunouchi, Chiyoda-ku, Tokyo 100-6520 Japan. In the event that an error is found in an NCL research report, a revised version will be posted on Citi Investment Research's Global Equities Online (GEO) website. If you have questions regarding GEO, please call (81 3) 6270-3019 for help. The Product is made available in Korea by Citigroup Global Markets Korea Securities Ltd., which is regulated by Financial Supervisory Commission and the Financial Supervisory Service. Hungkuk Life Insurance Building, 226 Shinmunno 1-GA, Jongno-Gu, Seoul, 110-061. The Product is made available in Malaysia by Citigroup Global Markets Malaysia Sdn Bhd, which is regulated by Malaysia Securities Commission. Menara Citibank, 165 Jalan Ampang, Kuala Lumpur, 50450. The Product is made available in Mexico by Acciones y Valores Banamex, S.A. De C. V., Casa de Bolsa, which is regulated by Comision Nacional Bancaria y de Valores. Reforma 398, Col. Juarez, 06600 Mexico, D.F. In New Zealand the Product is made available through Citigroup Global Markets New Zealand Ltd., a Participant of the New Zealand Exchange Limited and regulated by the New Zealand Securities Commission. Level 19, Mobile on the Park, 157 lambton Quay, Wellington. The Product is made available in Poland by Dom Maklerski Banku Handlowego SA an indirect subsidiary of Citigroup Inc., which is regulated by Komisja Papierów Wartosciowych i Gield. Bank Handlowy w Warszawie S.A. ul. Senatorska 16, 00-923 Warszawa. The Product is made available in the Russian Federation through ZAO Citibank, which is licensed to carry out banking activities in the Russian Federation in accordance with the general banking license issued by the Central Bank of the Russian Federation and brokerage activities in accordance with the license issued by the Federal Service for Financial Markets. Neither the Product nor any information contained in the Product shall be considered as advertising the securities mentioned in this report within the territory of the Russian Federation or outside the Russian Federation. The Product does not constitute an appraisal within the meaning of the Federal Law of the Russian Federation of 29 July 1998 No. 135-FZ (as amended) On Appraisal Activities in the Russian Federation. 8-10 Gasheka Street, 125047 Moscow. The Product is made available in Singapore through Citigroup Global Markets Singapore Pte. Ltd., a Capital Markets Services Licence holder, and regulated by Monetary Authority of Singapore. 1 Temasek Avenue, #39-02 Millenia Tower, Singapore 039192. The Product is made available by The Citigroup Private Bank in Singapore through Citibank, N.A., Singapore branch, a licensed bank in Singapore that is regulated by Monetary Authority of Singapore. Citigroup Global Markets (Pty) Ltd. is incorporated in the Republic of South Africa (company registration number 2000/025866/07) and its registered office is at 145 West Street, Sandton, 2196, Saxonwold. Citigroup Global Markets (Pty) Ltd. is regulated by JSE Securities Exchange South Africa, South African Reserve Bank and the Financial Services Board. The investments and services contained herein are not available to private customers in South Africa. The Product is made available in Taiwan through Citigroup Global Markets Inc. (Taipei Branch), which is regulated by Securities & Futures Bureau. No portion of the report may be reproduced or quoted in Taiwan by the press or any other person. No. 8 Manhattan Building, Hsin Yi Road, Section 5, Taipei 100, Taiwan. The Product is made available in Thailand through Citicorp Securities (Thailand) Ltd., which is regulated by the Securities and Exchange Commission of Thailand. 18/F, 22/F and 29/F, 82 North Sathorn Road, Silom, Bangrak, Bangkok 10500, Thailand. The Product is made available in United Kingdom by Citigroup Global Markets Limited, which is authorised and regulated by Financial Services Authority. This material may relate to investments or services of a person outside of the UK or to other matters which are not regulated by the FSA and further details as to where this may be the case are available upon request in respect of this material. Citigroup Centre, Canada Square, Canary Wharf, London, E14 5LB. The Product is made available in United States by Citigroup Global Markets Inc, which is regulated by NASD, NYSE and the US Securities and Exchange Commission. 388 Greenwich Street, New York, NY 10013. Unless specified to the contrary, within EU Member States, the Product is made available by Citigroup Global Markets Limited, which is regulated by Financial Services Authority. Many European regulators require that a firm must establish, implement and make available a policy for managing conflicts of interest arising as a result of publication or distribution of investment research. The policy applicable to Citi Investment Research's Products can be found at www.citigroupgeo.com. Compensation of equity research analysts is determined by equity research management and Citigroup's senior management and is not linked to specific transactions or recommendations. The Product may have been distributed simultaneously, in multiple formats, to the Firm's worldwide institutional and retail customers. The Product is not to be construed as providing investment services in any jurisdiction where the provision of such services would not be permitted. Subject to the nature and contents of the Product, the investments described therein are subject to fluctuations in price and/or value and investors may get back less than originally invested. Certain high-volatility investments can be subject to sudden and large falls in value that could equal or exceed the amount invested. Certain investments contained in the Product may have tax implications for private customers whereby levels and basis of taxation may be subject to change. If in doubt, investors should seek advice from a tax adviser. The Product does not purport to identify the nature of the specific market or other risks associated with a particular transaction. Advice in the Product is general and should not be construed as personal advice given it has been prepared without taking account of the objectives, financial situation or needs of any particular investor. Accordingly, investors should, before acting on the advice, consider the appropriateness of the advice, having regard to their objectives, financial situation and needs. Prior to acquiring any financial product, it is the client's responsibility to obtain the relevant offer document for the product and consider it before making a decision as to whether to purchase the product.

This Product is not intended for distribution in Poland. Any receipt or review of the Product in Poland is not authorized by the Firm.

© 2007 Citigroup Global Markets Inc. (© Nikko Citigroup Limited, if this Product was prepared by it). Citi Investment Research is a division and service marks of Citigroup or its affiliates and its affiliates and is used and registered throughout the world. Citigroup and the Umbrella Device are trademarks and service marks of Citigroup or its affiliates and are used and registered throughout the world. Nikko is a registered trademark of Nikko Cordial Corporation. All rights reserved. Any unauthorized use, duplication, redistribution or disclosure is prohibited by law and will result in prosecution. The information contained in the Product is intended solely for the recipient and may not be further distributed by the recipient. The Firm accepts no liability whatsoever for the actions of third parties. The Product may provide the addresses of, or contain hyperlinks to, websites. Except to the extent to which the Product refers to website material of the Firm, the Firm has not reviewed the linked site. Equally, except to the extent to which the Product refers to website material of the Firm takes no responsibility for, and makes no representations or warranties whatsoever as to, the data and information contained therein. Such address or hyperlink (including addresses or hyperlinks to website material of the Firm) is provided solely for your convenience and information and the content of the linked site does not in anyway form part of this document. Accessing such website or following such link through the Product or the website of the Firm shall be at your own risk and the Firm shall have no liability arising out of, or in connection with, any such referenced website.

ADDITIONAL INFORMATION IS AVAILABLE UPON REQUEST