# National Aluminium Co Ltd

**Neutral**

| | |
|---|---|
| **Target price (INR)** | **270.00** |
| **Share price (INR)** | **248.75** |
| **Potential total return (%)** | **8.5** |

| **Mar** | **2007a** | **2008e** | **2009e** |
|---|---|---|---|
| HSBC EPS | 36.96 | 27.60 | 19.82 |
| HSBC PE | 6.7 | 9.0 | 12.5 |
| **Performance** | **1M** | **3M** | **12M** |
| Absolute (%) | -14.3 | 2.5 | 24.9 |
| Relative^ (%) | -4.7 | 5.7 | 2.8 |

**23 August 2007**

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Issuer of report: HSBC Securities and Capital Markets (India) Private Limited



## Focus on upstream business continues

- **Nalco to retain focus on high-return upstream business; our visit to the smelter plant indicates expansion is on schedule, which should improve return on capital**
- **The company is exposed to the volatile spot market and currency risk; the INR47bn cash hoard should help limit the downside to the share price**
- **We use EV/EBITDA and relative PE to value the stock; raise target price from INR260 to INR270 and maintain Neutral**

## Expansion plans on schedule

National Aluminium Company Ltd (Nalco) continues to enjoy improved margins on the back of its low cost integrated operations. We expect the company to intensify the focus on its upstream business by using its large cash reserves to expand its alumina, aluminium and power capacities.

We visited Nalco's Angul aluminium smelter plant in Orissa and found the expansion work on schedule. Nalco's production cost is among the cheapest in the world as its alumina refinery is close to open cast bauxite mines. The company produces captive power at economical rates and saves INR35,500/tonne on aluminium production. Its EBITDA margin is one of the best in the industry on the back of its integrated value chain.

The company is going through a difficult time as aluminium and alumina prices are softening at a time when the INR is appreciating. Nalco plans to put in place a currency risk management team to control losses due to currency fluctuation. However, the company is sitting on a INR47bn cash pile, equivalent to 28% of its market capitalisation, which will be used to expand its bauxite mines, alumina refinery and aluminium smelter in the next 2-3 years. Given that the stock has already fallen 17% in the past month, we believe downside is limited by the cash reserves and the high return upstream business.

We use EV/EBITDA and relative PE to value the stock. We raise our target price from INR260 to INR270 and maintain our Neutral rating. Key risks include currency appreciation, volatility of commodity prices, delay in project execution and government interference through price controls.

| | |
|---|---|
| Index^ | BOMBAY SE IDX |
| Index level | 13989.11 |
| RIC | NALU.BO |
| Bloomberg | NACL IN |

Source: HSBC

| | |
|---|---|
| Enterprise value (INRm) | 112666 |
| Free float (%) | |
| Market cap (USDm) | 3,901 |
| Market cap (INRm) | 160,272 |

Source: HSBC

# Financials & valuation

### Financial statements

| Year to | 03/2007a | 03/2008e | 03/2009e | 03/2010e |
|---|---|---|---|---|
| **Profit & loss summary (INRm)** | | | | |
| Revenue | 59,402 | 56,191 | 50,240 | 51,162 |
| EBITDA | 35,277 | 28,320 | 20,228 | 18,782 |
| Depreciation & amortisation | -3,212 | -3,563 | -3,437 | -3,317 |
| Operating profit/EBIT | 32,065 | 24,757 | 16,791 | 15,465 |
| Net interest | 4,139 | 2,606 | 2,856 | 2,840 |
| PBT | 36,204 | 27,363 | 19,647 | 18,305 |
| HSBC PBT | 0 | 0 | 0 | 0 |
| Taxation | -12,390 | -9,577 | -6,877 | -6,407 |
| Net profit | 23,814 | 17,786 | 12,771 | 11,899 |
| HSBC net profit | 23,814 | 17,786 | 12,771 | 11,899 |
| **Cash flow summary (INRm)** | | | | |
| Cash flow from operations | 32,958 | 16,559 | 11,846 | 12,478 |
| Capex | -13,395 | -11,322 | -11,297 | -5,136 |
| Cash flow from investment | -9,256 | -8,716 | -8,440 | -2,295 |
| Dividends | -3,222 | -3,222 | -3,222 | -3,222 |
| Change in net debt | -21,499 | -4,170 | 267 | -6,510 |
| FCF equity | 12,113 | 10,656 | 5,606 | 10,152 |
| **Balance sheet summary (INRm)** | | | | |
| Intangible fixed assets | 0 | 0 | 0 | 0 |
| Tangible fixed assets | 51,950 | 59,709 | 67,569 | 69,387 |
| Current assets | 55,919 | 59,549 | 58,530 | 65,150 |
| Cash & others | 43,436 | 47,606 | 47,339 | 53,849 |
| Total assets | 107,869 | 119,258 | 126,099 | 134,537 |
| Operating liabilities | 18,387 | 15,163 | 12,406 | 12,118 |
| Gross debt | 0 | 0 | 0 | 0 |
| Net debt | -43,436 | -47,606 | -47,339 | -53,849 |
| Shareholders funds | 79,068 | 93,181 | 102,279 | 110,505 |
| Invested capital | 46,046 | 56,489 | 66,355 | 68,570 |

### Ratio, growth and per share analysis

| Year to | 03/2007a | 03/2008e | 03/2009e | 03/2010e |
|---|---|---|---|---|
| **Y-o-y % change** | | | | |
| Revenue | 22.4 | -5.4 | -10.6 | 1.8 |
| EBITDA | 33.2 | -19.7 | -28.6 | -7.1 |
| Operating profit | 41.2 | -22.8 | -32.2 | -7.9 |
| PBT | 49.0 | -24.4 | -28.2 | -6.8 |
| HSBC EPS | 52.4 | -25.3 | -28.2 | -6.8 |
| **Ratios (%)** | | | | |
| Revenue/IC (x) | 1.3 | 1.1 | 0.8 | 0.8 |
| ROIC | 45.9 | 31.4 | 17.8 | 14.9 |
| ROE | 34.5 | 20.7 | 13.1 | 11.2 |
| ROA | 26.1 | 15.7 | 10.4 | 9.1 |
| EBITDA margin | 59.4 | 50.4 | 40.3 | 36.7 |
| Operating profit margin | 54.0 | 44.1 | 33.4 | 30.2 |
| EBITDA/net interest (x) | | | | |
| Net debt/equity | -54.9 | -51.1 | -46.3 | -48.7 |
| Net debt/EBITDA (x) | -1.2 | -1.7 | -2.3 | -2.9 |
| CF from operations/net debt | | | | |
| **Per share data (INR)** | | | | |
| EPS reported (fully diluted) | 36.96 | 27.60 | 19.82 | 18.47 |
| HSBC EPS (fully diluted) | 36.96 | 27.60 | 19.82 | 18.47 |
| DPS | 5.00 | 5.00 | 5.00 | 5.00 |
| NAV | 122.72 | 144.62 | 158.74 | 171.51 |

### Key forecast drivers

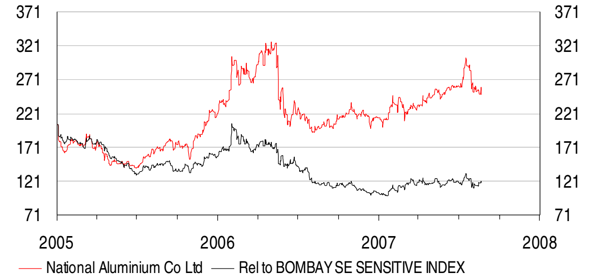
| Year to | 03/2007a | 03/2008e | 03/2009e | 03/2010e |
|---|---|---|---|---|
| LME aluminium price - USD/lb | 1 | 1 | 1 | 1 |
| LME alumina price - USD/t | 330 | 332 | 298 | 269 |
| INR : USD | 44 | 40 | 39 | 38 |
| Alumina - kt | 1,496 | 1,575 | 1,575 | 1,837 |
| Aluminium metal - kt | 345 | 345 | 345 | 388 |

### Valuation data

| Year to | 03/2007a | 03/2008e | 03/2009e | 03/2010e |
|---|---|---|---|---|
| EV/sales | 2.0 | 2.0 | 2.2 | 2.1 |
| EV/EBITDA | 3.3 | 4.0 | 5.6 | 5.7 |
| EV/IC | 2.5 | 2.0 | 1.7 | 1.6 |
| PE* | 6.7 | 9.0 | 12.5 | 13.5 |
| P/NAV | 2.0 | 1.7 | 1.6 | 1.5 |
| FCF yield (%) | 7.6 | 6.6 | 3.5 | 6.3 |
| Dividend yield (%) | 2.0 | 2.0 | 2.0 | 2.0 |

Note: * = Based on HSBC EPS (fully diluted)

### Price relative




Source: HSBC

Note: price at close of 21 Aug 2007

# Focus on upstream business to continue

- Management focus remains on the upstream business which has a better return profile than low-margin downstream operations
- Volatility of upstream business, on fluctuating aluminium and alumina prices, reduced through long-term alumina contracts
- Has a large cash pile which will be used to expand its alumina, aluminium and power capacities

## Expansion plans

Nalco plans to expand its upstream oil operations – its traditional focus area – over the next two years. It plans to use its cash reserves to fund the expansion as this should generate higher return on capital than treasury income. Management is less interested in the low-return downstream business.

### Hedging alumina exposure

Nalco plans to reduce the impact of volatility in the alumina segment. Nalco at present sells 50% of its alumina on long-term contracts which will expire this year. It is negotiating new long-term contracts and management has given us guidance of cUSD300/tonne compared to USD220/tonne for the previous contracts.

The remaining 50% is sold on the spot market. Nalco does not hedge its exposure, making it more vulnerable to swings in spot alumina prices.

### Lack of downstream assets is positive

The company only owns one downstream asset, the rolling product mill near its Angul plant. We believe that downstream assets are extremely capital intensive and given the pricing pressure, they are not value accretive. Another player, Hindalco, has built downstream assets to protect itself from fluctuating aluminium prices. Nalco's production is sold at spot prices exposing it to higher risks than other players. On the other hand, this exposure could earn superior profits than rivals in a rising commodity price cycle.

## One of the cheapest producers of alumina

The company has fully integrated operations. It has rich reserves of bauxite and coal reserves to produce power in addition to alumina and aluminium production facilities. Its integration across the value chain makes it one of the cheapest producers of alumina.

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## Proximity to coal and bauxite mines

Its alumina refinery at Damanjodi is located close to the bauxite mines in southern Orissa. Its smelter plant at Angul is just 35km from the coal mines of Mahanadi Coalfields Ltd (MCL) and its own coal mine. The company saves at least INR100/tonne on the cost of coal due to its proximity to coal mines.

## Transportation of raw materials

The company has set up its own rail transportation from the coal mine to its power plant for the smelter. It is a 35km dedicated railway line, which saves INR100/tonne compared to transportation by truck. Its coal supplier, MCL, has installed 8km of conveyer belts for transporting coal from mines to a wagon loading site, which makes the mine free of hiccups that typify road transport during the monsoon.

# 1Q FY08 results update

## Rising INR and sluggish alumina hits profit

Nalco's 1Q FY08 results were disappointing as it reported a fall of 34% in its EBITDA, while revenue declined by 22% y-o-y. The fall was mostly due to INR appreciation against USD in the last quarter and the fact that aluminium companies in India had to cut their prices three times in the last quarter. Although other income was higher by 57% y-o-y, net profit fell 28%.

**Nalco: summary of 1Q FY08 results (INRm)**

| Income head | 1Q FY08 | 1Q FY07 | y-o-y growth |
|---|---|---|---|
| Net Sales | 11,652 | 14,855 | -22% |
| Expenditure | (5,488) | (5,512) | 0% |
| EBITDA | 6,164 | 9,344 | -34% |
| Depreciation | (692) | (787) | -12% |
| EBIT | 5,473 | 8,557 | -36% |
| Interest cost | (1) | - | |
| Other Income | 1,310 | 834 | 57% |
| Profit before Tax | 6,782 | 9,391 | -28% |
| Tax | (2,315) | (3,168) | -27% |
| Net profit | 4,467 | 6,223 | -28% |

Source: HSBC

# Key issues

## INR appreciation

The INR appreciated 7.3% against the USD over March-August 2007. This severely affected its 1Q FY08 results. The sensitivity of the company's profitability to currency fluctuation is described in the valuation section.

## Huge cash reserves

The company is sitting on a huge cash pile of INR47bn that it plans to use to fund expansion in its upstream operations. This makes sense as it earns good returns on the cash deployed in productive assets compared to treasury income. On the other hand, this also reduces its return on equity substantially compared to a leveraged balance sheet.

## Hedging strategies

Nalco sells 50% of alumina in the spot market and the rest through long-term contracts. We expect the company to negotiate better prices for its contracts.

The company has appointed consultants to advise it on currency risk management. This may turn positive over the long term, but we have not factored in any benefit from the hedging strategy in our forecasts.

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# Backward integration to improve margin

- Nalco to save at least INR150/tonne on coal production of 2mtpa; this should improve EBITDA margin by 200bps by FY10
- New project to produce power at INR1.11/kWh; it may use cash from internal accruals for financing
- Although it is exporting surplus power to Grid Corporation of Orissa (Gridco), we do not expect Nalco to sell additional power until it negotiates higher prices

Nalco has been allotted the Utkal block E (68 million tonnes of reserves) near its smelter at Angul, Orissa. We expect the production of coal from the mine to commence by FY09 and to have 2mtpa of production from FY10. We also expect the company to save INR150/tonne on its coal cost from FY10, which in turn should expand its aluminium EBITDA by 200bps. We expect the cost of production of the new facility to be INR1.11/kWh, and the plant to be fully financed through internal accruals.

Nalco expects the quality of coal to be similar to that of MCL. In addition, it has applied for more coal blocks for captive consumption and to cater to its expansion needs.

## Coal transportation

At present, Nalco gets all of its coal from MCL. It has a dedicated train system for carrying coal from the coal mine. The new coal block is just 35km from the Nalco smelter and the coal can be transported by conveyer belt and train to the power plant. We expect the total transportation cost to be INR100/tonne. Nalco is talking with the Indian Railways about setting up a dedicated train system for this block.

## Operation of the coal mine

We expect the cost of production of coal from this coal mine to be in the range of INR350-450/tonne. As it is "F" grade coal, we expect its calorific value to be 2,800-3,200 kcal/kg. Considering the comparable coal price from MCL for "F" grade coal, the company is likely to save at least INR150/tonne.

## Captive coal to improve margins

The smelter consumes c14,000-15,000 kWh of electricity while converting alumina to aluminium. As power is the main raw material for aluminium manufacturing, any saving on coal price should be positive for the company. Our assessment shows that saving of INR150/tonne on coal sourcing will reduce the cost of power by

INR0.1/kWh, in turn improving EBITDA margin on aluminium smelting by 200bps.

## Margin sensitivity

We have tried to assess the impact of cost of power on the smelting margin. As aluminium smelting consumes 14,000-15,000 kWh of power per tonne of production, the cost of power is the most important factor influencing EBITDA margin. The best case scenario of 14,200kWh/ton consumption with INR1.01/kWh power cost gives EBITDA margin of 21.87% and the worst 18.61%.

We expect the coal mine to produce 1.6mtpa and 2.0mtpa in FY09 and FY10 respectively, which in turn will have cost of power of INR1.14/kWh and INR1.10/kWh for FY09 and FY10 respectively.

## Coal supply crisis

Normally, MCL supplies 14-15 kt of coal daily but currently, due to problems with its conveyor belt, it is supplying only 6-8 kt. Due to a shortage of coal, one unit of a 120 MW power plant is shut down. The smelter plant is buying power from Gridco at INR3.55/kWh instead of exporting 1m kWh of power to Gridco.

We expect the plant to get enough coal supplies from Bharat Coking Coal Ltd (BCCL). The company is working out a solution with the help of Indian Railways to bring BCCL coal from the state of Jharkhand to its plant in Orissa. It is also trying to transport some coal from MCL mines to plant by truck. We expect the coal shortage to be short lived and its power plants to get enough coal supplies within a month.

On the back of coal shortages for a month and half, we cut utilisation of its captive power plant at Angul by 6% for FY08. We expect the company to procure power from Gridco for INR798m, which should erode its EBITDA for 2Q FY08 substantially.

## Captive power to reduce cost

Its Angul plant is producing power at INR1.17/kWh as it is an old plant and consumes more coal. Its new plant will consume less fuel and its operation and maintenance cost will be lower due to sharing of infrastructure, including manpower. We lower the weighted average cost of power for FY09 and FY10 to INR1.14/kWh and INR1.11/kWh respectively on the back of lower cost of captive coal and the new plant becoming operational.

### Co-generation plant at Damanjodi

Its co-generation plant at Damanjodi alumina refinery is very small. It uses waste steam from the alumina refinery for producing power. It has three units of 17.5 MW each, and one is kept as a stand-by unit. As it does not have a boiler and furnace set up, its cost of power is quite low.

## Captive power: huge savings

The company has a huge captive 960MW plant at Angul and it is expanding that capacity by 240MW. It had 35 MW operational capacities at Damanjodi which is a co-generation facility. The saving, if we were to compare the cost of power of INR1.17/kWh to the cost of grid power at INR3.55/kWh, works out to cINR34,500/tonne of aluminium production.

**Sensitivity of cost of power (INR/kWh) and power consumption (kWh/t) to smelting EBITDA margin**

| Cost of power / power consumption | 1.01 | 1.04 | 1.07 | 1.10 | 1.13 | 1.16 |
|---|---|---|---|---|---|---|
| 14,200 | 27.06% | 26.67% | 26.29% | 25.91% | 25.53% | 25.15% |
| 14,500 | 26.78% | 26.39% | 26.00% | 25.61% | 25.22% | 24.83% |
| 14,800 | 26.51% | 26.11% | 25.72% | 25.32% | 24.92% | 24.52% |
| 15,100 | 26.24% | 25.84% | 25.43% | 25.02% | 24.62% | 24.21% |
| 15,400 | 25.97% | 25.56% | 25.14% | 24.73% | 24.31% | 23.90% |

Cost of power in the top row, power consumption in extreme left column
Source: HSBC

HSBC

## Selling surplus power to grid

The company has been selling on average 1mkWh/day to Gridco as per its long-term power purchase agreement (PPA) price of INR1.17 until end-FY10. As per the PPA, Nalco has to sell all the power to Gridco and not to any power trading company. Any power it produces over and above 1m kWh/day is priced at INR2.3/kWh. For an old plant like Angul, it is difficult to produce over 1m kWh of power. We have not forecast any sale of power at INR2.3/kWh in our estimates.

## Sensitivity analysis

The cost of power (INR/kWh) is sensitive to coal consumption (kg/kWh) and cost of coal (INR/tonne). Cost of power production could be as low as INR1.00/kWh if the cost of coal is as low as INR500/tonne and coal consumption is controlled at 1 kg/kWh. We have summarised the sensitivity of cost of power to these two variables in the following table.

**Sensitivity of cost of power produced (INR/kWh) to coal consumption (kg/kWh) and cost of coal (INR/t)**

| Coal consumption | 1.00 | 1.02 | 1.04 | 1.06 | 1.08 |
|---|---|---|---|---|---|
| **500.00** | 0.96 | 0.97 | 0.98 | 0.99 | 1.00 |
| **550.00** | 1.01 | 1.02 | 1.03 | 1.04 | 1.05 |
| **600.00** | 1.06 | 1.07 | 1.08 | 1.10 | 1.11 |
| **650.00** | 1.11 | 1.12 | 1.14 | 1.15 | 1.16 |
| **700.00** | 1.16 | 1.17 | 1.19 | 1.20 | 1.22 |

Cost of power in top row; cost of coal in extreme left column
Source: HSBC

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# Valuation

- EV/EBITDA valuation is the best way of valuing Nalco's commodity business as well as the cash on its books
- We also value the company using its 10-year average PE
- We raise our target price from INR260 to INR270 and maintain Neutral rating

## Two valuation approaches

We find the sum-of-the-parts valuation approach the most convincing as we value Nalco's integrated smelting business and cash in books separately. This is the approach considered by long-term investors and also management. We also use relative valuation based on its 10-year average PE. Our target price of INR270 is based on the average of EV/EBITDA and relative valuation.

### EV/EBITDA valuation

We have valued Nalco's integrated smelting business at 5x FY08 EBITDA, which is at discount to the global average of 7.6x. We value it at discount to the global average as its EBITDA is declining by 29% in FY09 against the c7% global average. We value it at INR294 based on sum-of-the-parts valuation. Details of the EV/EBITDA valuation are given in the table below.

### PE valuation

Over the past 10 years, the company has gone through commodity cycles, so the average PE can be used as a benchmark for setting a target price for the next 12 months. Based on Nalco's 10 year historical average PE of 8.9.x, we value the stock at INR246 per share.

## Dividend policy

The company has been paying INR5 per share as a dividend for the past two years. As it is planning to spend INR50bn on capacity expansion over the next 2-3 years, we expect the company to maintain its payout at INR5/share. The current dividend yield per share is 2% compared to the regional average of 3.8%. Going forward, we do not forecast any rise in dividend payout.

**EV/EBITDA valuation**

| Business segment | Assumption | Valuation (INRm) | Value per share (INR) |
|---|---|---|---|
| Smelting integrated operations | | | |
| EBITDA for FY08 (INRm) | 28,320 | | |
| Asian aluminium '07 EV/EBITDA multiple (x) | 5 | | |
| Value of | | 141,598 | 220 |
| Net debt FY08 | | 47,606 | 74 |
| **EV/EBITDA valuation** | | **189,204** | **294** |

Source: HSBC

HSBC

# Sensitivity analysis

We attempt to measure the impact of fluctuation in INR/USD exchange rate on Nalco's earnings. For forecasting the earnings of the company, we have used our house forecast on INR/USD. If the average alumina realisation is USD400/tonne and the average exchange rate is INR42/USD, the best case EPS could be as high as INR33.8. Other scenarios are mentioned in the table below:

**Sensitivity of FY08 EPS (INR) with alumina price (USD/t) and exchange rate (INR/USD)**

| INR/USD | 38 | 39 | 40 | 41 | 42 |
|---|---|---|---|---|---|
| 300 | 22.6 | 24.0 | 25.4 | 26.8 | 28.1 |
| 325 | 23.9 | 25.3 | 26.7 | 28.1 | 29.6 |
| 350 | 25.2 | 26.6 | 28.1 | 29.5 | 31.0 |
| 375 | 26.5 | 27.9 | 29.4 | 30.9 | 32.4 |
| 400 | 27.7 | 29.3 | 30.8 | 32.3 | 33.8 |

Exchange rate in the top row, alumina prices in the extreme left column.
Source: HSBC

## Sensitivity of EPS to alumina and aluminium prices

We gauge the sensitivity of earnings to alumina and aluminium realisation in USD/tonne. For forecasting Nalco's earnings, we have used our house forecast on INR/USD. If the average alumina realisation is USD400/tonne and aluminium price is USD3000/tonne (the best case), EPS could be as high as INR31.2. Other scenarios are given in the table below.

**Sensitivity of FY08 EPS to alumina and aluminium prices (USD/t)**

| Al. price | 2200 | 2400 | 2600 | 2800 | 3000 |
|---|---|---|---|---|---|
| 300 | 25.8 | 25.8 | 25.8 | 25.8 | 25.8 |
| 325 | 27.2 | 27.2 | 27.2 | 27.2 | 27.2 |
| 350 | 28.5 | 28.5 | 28.5 | 28.5 | 28.5 |
| 375 | 29.9 | 29.9 | 29.9 | 29.9 | 29.9 |
| 400 | 31.2 | 31.2 | 31.2 | 31.2 | 31.2 |

Aluminium prices in the top row, alumina prices in the extreme left column. EPS in INR.
Source: HSBC

# Peer comparison

The company is the cheapest among peers in Asia Pacific. Compared to regional PE for the next year of 10.8x, it is trading at 9.0x, a discount of 10% to the regional average. Given its huge cash reserves, and because it is one of the cheapest producers of alumina in the world, we expect it to trade at par with the regional average as its capacity addition will not be operational in the next two years; at our target price, the stock is valued at 9.8x FY08e EPS estimates.

**Aluminium regional peer group table**

| Stock (rating) | Currency | Price | Market Cap US$m | PE 2007 | PE 2008 | EV/EBITDA 2007 | EV/EBITDA 2008 | Yield(%) 2007 | Yield(%) 2008 |
|---|---|---|---|---|---|---|---|---|---|
| Chalco – H (Underweight) | HKD | 13.3 | 19,025 | 13.3x | 14.0x | 6.9x | 6.8x | 2.6 | 2.5 |
| Alumina Ltd (Neutral) | AUD | 6.47 | 6,052 | 15.0x | 14.6x | 6.2x | 6.0x | 3.7 | 3.7 |
| Hindalco (Underweight) | INR | 136.2 | 4,068 | 5.7x | 7.7x | 4.7x | 6.2x | 3.0 | 2.2 |
| Nalco (Neutral) | INR | 248.75 | 3,901 | 9.0x | 12.5x | 5.6x | 4.0x | 2.0 | 2.0 |
| **Regional average** | | | | **10.8x** | **12.2x** | **5.8x** | **5.7x** | **2.8** | **2.6** |

Source: HSBC

# Risks

- Appreciating INR against USD poses the biggest risk to our thesis
- Sluggish alumina and aluminium prices on the back of rising supply could affect profitability
- Government intervention in raising aluminium prices, as in the steel sector, may be another risk beyond company's control

## Business risk

### Commodity prices

Commodity prices are cyclical in nature and fluctuate accordingly. Any sudden change in demand may affect the commodity prices and in turn, the profitability of the company. Companies like Nalco have hedged commodity prices like alumina by entering into long-term contracts.

### Currency risk

Asian currencies have been rising against USD and INR has appreciated by 11% against USD in the past three months. As alumina and aluminium prices are in USD, appreciation of the Indian currency directly hits Nalco's profitability. Any further appreciation could affect its earnings in the near term. Although Nalco is planning to hedge its exposure to currency, hedging doesn't protect the profitability entirely.

### Delay in project execution

Nalco is implementing expansion of its bauxite mines, alumina refinery and aluminium smelter. Although the expansion is on schedule, any unforeseen event may cause a delay in execution. The delay in project execution may affect the profitability and our valuation of the company.

## Political risk

### Government may control prices

Earlier, the Government of India tried to control price hikes by steel producers. This may happen in the case of aluminium producers if aluminium prices rise in the international market. Any price control imposed by the government on the company may affect its profitability in a big way.

# Disclosure appendix

## Analyst certification

The following analyst(s), who is(are) primarily responsible for this report, certifies(y) that the opinion(s) on the subject security(ies) or issuer(s) and any other views or forecasts expressed herein accurately reflect their personal view(s) and that no part of their compensation was, is or will be directly or indirectly related to the specific recommendation(s) or views contained in this research report: Prasad Dahapute and Daniel Kang

## Important disclosures

**Stock ratings and basis for financial analysis**

HSBC believes that investors utilise various disciplines and investment horizons when making investment decisions, which depend largely on individual circumstances such as the investor's existing holdings, risk tolerance and other considerations. Given these differences, HSBC has two principal aims in its equity research: 1) to identify long-term investment opportunities based on particular themes or ideas that may affect the future earnings or cash flows of companies on a 12 month time horizon; and 2) from time to time to identify short-term investment opportunities that are derived from fundamental, quantitative, technical or event-driven techniques on a 0-3 month time horizon and which may differ from our long-term investment rating. HSBC has assigned ratings for its long-term investment opportunities as described below.

This report addresses only the long-term investment opportunities of the companies referred to in the report. As and when HSBC publishes a short-term trading idea the stocks to which these relate are identified on the website at www.hsbcnet.com/research. Details of these short-term investment opportunities can be found under the Reports section of this website.

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## Rating definitions for long-term investment opportunities

**Stock ratings**

HSBC assigns ratings to its stocks in this sector on the following basis:

For each stock we set a required rate of return calculated from the risk free rate for that stock's domestic, or as appropriate, regional market and the relevant equity risk premium established by our strategy team. The price target for a stock represents the value the analyst expects the stock to reach over our performance horizon. The performance horizon is 12 months. For a stock to be classified as Overweight, the implied return must exceed the required return by at least 5 percentage points over the next 12 months (or 10 percentage points for a stock classified as Volatile*). For a stock to be classified as Underweight, the stock must be expected to underperform its required return by at least 5 percentage points over the next 12 months (or 10 percentage points for a stock classified as Volatile*). Stocks between these bands are classified as Neutral.

Our ratings are re-calibrated against these bands at the time of any 'material change' (initiation of coverage, change of volatility status or change in price target). Notwithstanding this, and although ratings are subject to ongoing management review, expected returns will be permitted to move outside the bands as a result of normal share price fluctuations without necessarily triggering a rating change.

*A stock will be classified as volatile if its historical volatility has exceeded 40%, if the stock has been listed for less than 12 months (unless it is in an industry or sector where volatility is low) or if the analyst expects significant volatility. However, stocks which we do not consider volatile may in fact also behave in such a way. Historical volatility is defined as the past month's average of the daily 365-day moving average volatilities. In order to avoid misleadingly frequent changes in rating, however, volatility has to move 2.5 percentage points past the 40% benchmark in either direction for a stock's status to change.

Prior to this, from 7 June 2005 HSBC applied a ratings structure which ranked the stocks according to their notional target price vs current market price and then categorised (approximately) the top 40% as Overweight, the next 40% as Neutral and the last 20% as Underweight. The performance horizon is 2 years. The notional target price was defined as the mid-point of the analysts' valuation for a stock.

From 15 November 2004 to 7 June 2005, HSBC carried no ratings and concentrated on long-term thematic reports which identified themes and trends in industries, but did not make a conclusion as to the investment action that potential investors should take.

Prior to 15 November 2004, HSBC's ratings system was based upon a two-stage recommendation structure: a combination of the analysts' view on the stock relative to its sector and the sector call relative to the market, together giving a view on the stock relative to the market. The sector call was the responsibility of the strategy team, set in co-operation with the analysts. For other companies, HSBC showed a recommendation relative to the market. The performance horizon was 6-12 months. The target price was the level the stock should have traded at if the market accepted the analysts' view of the stock.

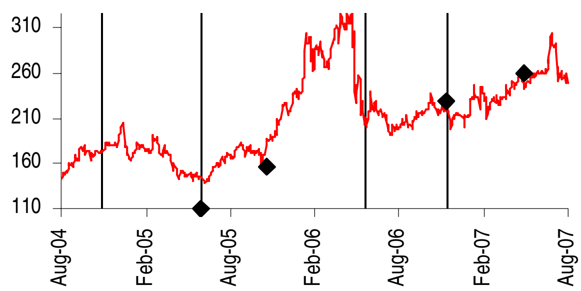
## Rating distribution for long-term investment opportunities

**As of 22 August 2007, the distribution of all ratings published is as follows:**

| | | |
|---|---|---|
| **Overweight (Buy)** | 46% | (23% of these provided with Investment Banking Services) |
| **Neutral (Hold)** | 35% | (24% of these provided with Investment Banking Services) |
| **Underweight (Sell)** | 19% | (18% of these provided with Investment Banking Services) |

## Share price and rating changes for long-term investment opportunities

**National Aluminium Co Ltd Share Price performance INR Vs HSBC rating history**




Source: HSBC

**Recommendation & price target history**

| From | To | Date |
|---|---|---|
| Buy | N/R | 15 November 2004 |
| N/R | Underweight | 21 June 2005 |
| Underweight | N/A | 08 June 2006 |
| N/A | Neutral | 01 December 2006 |
| **Target Price** | **Value** | **Date** |
| Price 1 | N/R | 15 November 2004 |
| Price 2 | 110.00 | 21 June 2005 |
| Price 3 | 156.00 | 09 November 2005 |
| Price 4 | N/A | 08 June 2006 |
| Price 5 | 230.00 | 01 December 2006 |
| Price 6 | 260.00 | 21 May 2007 |

Source: HSBC

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## Additional disclosures

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