

# Saudi Arabian Mining Co. (Ma'aden) (1211.SE)

|                          |                    |
|--------------------------|--------------------|
| Rating                   | <b>OUTPERFORM*</b> |
| Price (02 Sep 08, SAR)   | 24.75              |
| Target Price (SAR)       | 36.57 <sup>†</sup> |
| Market cap. (SAR m)      | 22,893.75          |
| Enterprise value (SAR m) | 19,043.2           |

\*Stock ratings are relative to the relevant country index.

<sup>†</sup>Target price is for 12 months.

## Research Analysts

**Zeid Massad**

+971 4 362 0187

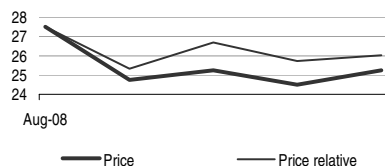
zeid.massad@credit-suisse.com

## INITIATION

## Turning Saudi minerals to riyals

- **Initiating coverage with an Outperform rating:** We expand our Saudi market coverage via this initiation on the Saudi Arabian Mining Company (Ma'aden) at a price target of SAR 36.57/share, reflecting 48% potential upside from the current price. Ma'aden stock was recently floated on the Saudi Stock Exchange (Tadawul), marking the debut of a mining company on the exchange.
- **To become the lowest-cost DAP producer:** Ma'aden, in partnership with SABIC, is building the world's largest fully integrated DAP facility with 2.9m tpy production capacity. It is planned for the plant to come onstream in 2011. Access to over 20 years of phosphate reserves, and low costs for natural gas, sulphur and electricity will blend to produce DAP at US\$100/t, comparing very strongly to current costs at other global integrated and non-integrated producers of c.US\$450/t and US\$1,000/t, respectively. Current valuations do not capture our forecast of c.90% EBITDA margins on DAP sales once production reaches high operating rates.
- **Tapping the Kingdom's bauxite resources:** With strong JV partner Rio Tinto Alcan, Ma'aden is benefiting from the geographical shift of aluminium production to areas with competitive advantage in energy resources.
- **Strong government support:** The Saudi government has a strategic interest in making Ma'aden a "third pillar" of the Saudi economy (along with Saudi Aramco and SABIC), as announced projects could potentially make strong contributions to the Saudi economy. Thus, the government is providing critical success factors such as the North-South rail road network and a port on the Arabian Gulf, fuel allocations and energy subsidies.
- **Valuation:** We believe projects should start yielding results in 2011. To capture Ma'aden's long-term cash flows, we value it at SAR 36.57/share using a finite DCF model with a WACC of 9% over the expected production life of its projects.
- Credit Suisse Securities (Europe) Ltd is a connected party, acting as advisor and corporate broker to Rio Tinto which was recently approached by BHP Billiton.

## Share price performance



The price relative chart measures performance against the MSCI Arabian markets index - GCC CI index which closed at 715.42 on 02/09/08

On 02/09/08 the spot exchange rate was SAR5.44/Eu 1. - Eu 0.69/US\$1

| Performance  | 1M    | 3M | 12M |
|--------------|-------|----|-----|
| Absolute (%) | -10.0 | —  | —   |
| Relative (%) | -5.8  | —  | —   |

## Financial and valuation metrics

| Year                        | 12/07A   | 12/08E               | 12/09E | 12/10E |
|-----------------------------|----------|----------------------|--------|--------|
| Revenue (SAR m)             | 244.1    | 635.1                | 710.3  | 724.6  |
| EBITDA (SAR m)              | 6.90     | 608.09               | 551.43 | 538.20 |
| Net Income (SAR m)          | -26.5    | 268.3                | 211.7  | -286.4 |
| CS adj. EPS (SAR)           | -0.03    | 0.29                 | 0.23   | -0.31  |
| ROIC (%)                    | —        | —                    | —      | —      |
| P/E (adj., x)               | -862.42  | 85.34                | 108.12 | -79.93 |
| P/E rel. (%)                | —        | —                    | —      | —      |
| EV/EBITDA                   | 2,927.6  | 31.3                 | 51.6   | 68.3   |
| Dividend (2008E, SAR)       | —        | IC (12/07A, SAR m)   | —      | —      |
| Dividend yield (%)          | —        | EV/IC                | —      | —      |
| Net debt (12/08E, SAR m)    | -3,850.5 | Current WACC         | 9.0    | —      |
| Net debt/equity (12/08E, %) | -25.6    | Free float (%)       | 50.0   | —      |
| BV/share (12/08E, SAR)      | 16.3     | Number of shares (m) | 925.00 | —      |

Source: Company data, Thomson Financial Datastream, Credit Suisse estimates.

# Table of contents

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|                                                                                                        |    |
|--------------------------------------------------------------------------------------------------------|----|
| Investment thesis                                                                                      | 3  |
| Key points                                                                                             | 4  |
| Logistical integration and proximity to South Asia                                                     | 4  |
| Long reserve life                                                                                      | 4  |
| Low-cost aluminium producer                                                                            | 4  |
| Major capex expansion, unlevered balance sheet and financial backing                                   | 4  |
| Diversification to reduce cash-flow cyclicality                                                        | 5  |
| Strong international partners and domestic support                                                     | 6  |
| Fully integrated phosphate rock to fertiliser operation                                                | 6  |
| Not firing on all cylinders before 2012–13                                                             | 6  |
| Valuation                                                                                              | 7  |
| Company background                                                                                     | 12 |
| Structure to facilitate jointly operating projects with global partners<br>such as Rio Tinto and SABIC | 12 |
| Overview of assets                                                                                     | 13 |
| Gold operations (Ma'aden Gold Company)                                                                 | 13 |
| Expansion projects                                                                                     | 16 |
| The phosphate project (PhosCo)                                                                         | 16 |
| Aluminium Project (AlumCo)                                                                             | 21 |
| Risks                                                                                                  | 22 |
| Infrastructure                                                                                         | 23 |
| Other projects                                                                                         | 23 |
| Phosphates/DAP overview                                                                                | 24 |
| Moving through the next decade                                                                         | 25 |
| Just a cycle—or a different game?                                                                      | 26 |
| Asia, a closer look at agriculture                                                                     | 26 |
| Aluminium overview                                                                                     | 29 |
| Structural change an opportunity for Ma'aden                                                           | 29 |
| Supply/demand                                                                                          | 30 |

# Investment thesis

We initiate coverage of the Saudi Arabian Mining Company (Ma'aden) with an Outperform rating and a price target of SAR 36.57/share, 48% potential upside from the current price. With this report, we start Credit Suisse's coverage of MENA's mining sector and continue expansion of our Saudi market coverage.

Ma'aden looks set to transform from being a stand-alone gold operation to becoming a diversified miner of gold, aluminium and phosphate rock. The significant support of the Saudi government through providing necessary infrastructure and low-cost inputs, combined with technical know-how, management expertise and operational guidance from global partners such as Rio Tinto (aluminium) and SABIC (fertilisers) should mitigate execution risks for the company's projects.

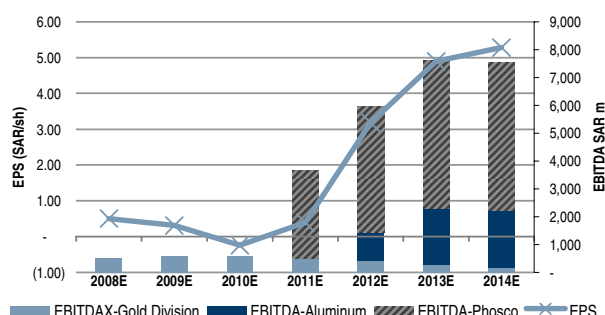
We expect the phosphate project to contribute over 70% of the company's total EBITDA in 2012 as it expects to ramp up production from the world's largest integrated diammonium phosphate (DAP) facility, placing Ma'aden on the global map of phosphate fertiliser producers. We believe Ma'aden, through a low cost of production of its planned fertiliser complex located near Saudi Aramco's oil & gas facilities (providing low-cost natural gas and sulphur) and residing near ports on the Arabian Gulf will fill the supplier gap between North Africa and South and East Asia. We expect 1) vertically integrated DAP producers like Ma'aden to remain in a stronger position than those relying on phosphate rock/phosphoric acid imports; 2) Ma'aden's competitive production costs of c.US\$100/tonne (compared to other global producers' costs running between US\$450–1000/t) to achieve strong EBITDA margins close to 90% on DAP; and 3) that shorter shipping distances (and costs) to South Asia compared to both Jordan and North Africa will further underpin Ma'aden's competitive advantage as we estimate a US\$60/t differential of shipping fertilisers from the Arabian Gulf to South Asia compared to inbound shipments from North Africa.

We expect the aluminium division to commence operations in 2012, a new integrated 720k tonne facility with a captive oil-fired power plant providing low cost electricity has the potential to add to the firm's cash flows if aluminium prices hold firm in the long term.

We expect the existing gold division to produce around 180k ounces of gold in 2008 from the five currently operating mines. The company has not yet provided operational/financial updates for the 2008 calendar year. However, we anticipate that at Ma'aden's advanced exploration sites, to which the company has allocated funds to undertake further exploration and mining, there exists the potential to provide significant additions to the company's gold reserves, and consequently support a stronger valuation.

Prices for DAP have recently reached over US\$1,200/tonne. We estimate DAP prices to average US\$677/tonne level over the longer term.

**Figure 1: Very significant growth to start in 2011**



Source: Credit Suisse estimates

**Figure 2: Ma'aden is a long-term agricultural play**

## Valuation sensitivity to DAP prices:

| LT DAP assumption (\$/tonne) | 300   | 400   | 500   | 600   | 677   | 800   | 900   |
|------------------------------|-------|-------|-------|-------|-------|-------|-------|
| Share value (SAR/sh)         | 14.9  | 20.6  | 26.4  | 32.1  | 36.6  | 43.6  | 49.4  |
| 2012E EBITDA (SAR m)         | 3,316 | 3,984 | 4,653 | 5,322 | 5,837 | 6,660 | 7,329 |
| Current EV/2012E EBITDA      | 6.1   | 5.1   | 4.3   | 3.8   | 3.5   | 3.0   | 2.8   |

**Current Ma'aden share price reflects around US\$490/t DAP price. IPO price of SAR20 reflects around US\$400/t.**

## Valuation metrics do not factor Ma'aden's lucrative margins

|                     | 2008E | 2009E | 2010E  | 2011E | 2012E | 2013E |
|---------------------|-------|-------|--------|-------|-------|-------|
| Current EV/EBITDA   | 69.1  | 59.6  | 59.5   | 8.0   | 4.9   | 3.8   |
| Cash-flow per share | 0.64  | 0.45  | (0.10) | 2.05  | 5.13  | 6.94  |
| EPS                 | 0.50  | 0.31  | (0.24) | 0.39  | 3.18  | 4.90  |
| P/E                 | 49.32 | 80.15 | NA     | 62.99 | 7.78  | 5.05  |

Source: Company data, Credit Suisse estimates

# Key points

## Logistical integration and proximity to South Asia

India and Pakistan are currently the world's largest DAP importers. Banking on low cost and proximity, Ma'aden is expected to attract South Asian demand away from other North African and American producers. Proximity to growing emerging economies should position Ma'aden well to grow from rising incomes and populations in neighbouring developing economies. Both PhosCo and AlumCo will share the railway and port infrastructures, potentially creating synergies between the two projects. Moreover, the location of aluminium and fertiliser facilities should enable leveraging of the port infrastructure to smooth the export flow of Ma'aden's products, in addition to facilitating the import of some materials, such as coke and pitch, necessary for aluminium production from the open market.

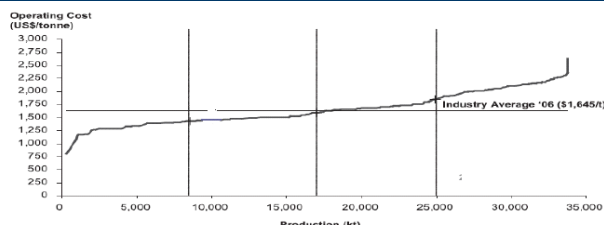
## Long reserve life

The company has plans to develop phosphate reserves of 223m tonnes, out of a total estimate of 534m tons of computed resources. This circumstance has two potential outcomes: extend the project life or invest in capacity additions over the current project life. We believe current aluminium reserves in Al Zubeira can provide for over 30 years of production life. Further exploration activities will target higher-grade bauxite reserve additions to leverage the returns of the aluminium project.

## Low-cost aluminium producer

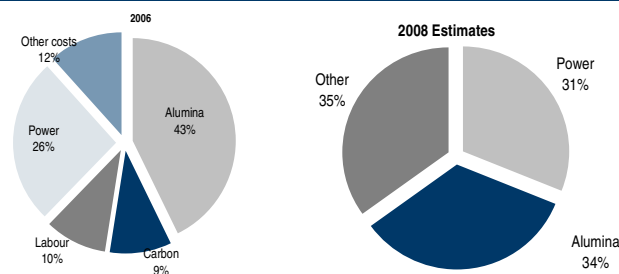
US\$1,056/tonne of aluminium cash costs estimates from the feasibility study for the project are at the lowest quartile of the global aluminium cost curve. Aluminium production will leverage off 1) oil-fired electric power plant source to cost the JV an estimated US\$24/MWh; and 2) shared rail and port infrastructure with other projects. More importantly, the cost structure should be less volatile compared to that of other global producers due to 1) access to significant bauxite resource; 2) ownership of power generation facilities supplied oil by Aramco; and 3) a low labour cost component, as the JV plans to subcontract mining operations. Most of the variability will likely come from the movement of prices of coke and pitch on global markets.

**Figure 3: Aluminium 2006 global cost curve**



Source: Company data, Credit Suisse estimates

**Figure 4: Energy's increasing share of global average aluminium costs – 2006 vs estimates for 2008**



Source: CRU, AME Mineral Economics

## Major capex expansion, unlevered balance sheet and financial backing

Earlier this year, the Saudi government, represented by the Public Investment Fund (PIF), increased the capital in Ma'aden by SR1.25bn in preparation for the planned expansion and followed this by floating 50% of the shares, which raised approximately SAR 9.175bn net of underwriting fees. All proceeds were pumped into the company, which combined with a zero-debt balance sheet should aid the company in obtaining borrowings.

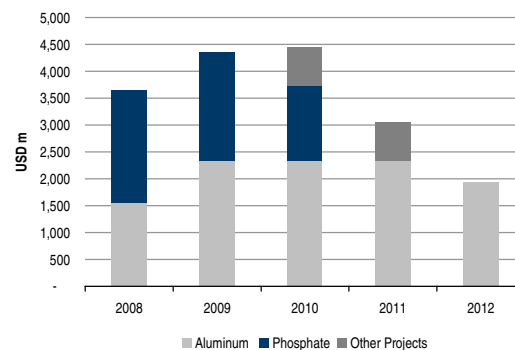
Ma'aden signed financing agreements with banks for US\$2.76bn to fund PhosCo, in addition to which the Public Investment Fund agreed to extend a US\$1.067bn line of credit to the same project. As for working capital financing, the company is currently negotiating a letter of credit facility with Export-Import bank of Korea and Korea Export Insurance for US\$600m. According to Ma'aden, the aluminium project will be funded through a 30–40% equity participation between Ma'aden and Rio Tinto, with the balance coming via limited recourse loans. The company has expressed intentions to use the US dollar as its debt financing currency to match dominantly dollar-denominated costs. Our models indicate that the company will not need to tap debt financing before 2009, which could enable the company to avoid the global credit turmoil that has recently bumped up the cost of borrowing in US dollars.

**Figure 5: Project financing**

| Source of Funding | SAR bln     | USD bln     | % of total costs |
|-------------------|-------------|-------------|------------------|
| <b>Equity</b>     |             |             |                  |
| Maaden            | 15.5        | 4.1         | 24%              |
| Project Partners  | 8.9         | 2.4         | 14%              |
| Sabic             | 1.9         |             |                  |
| Rio Tinto Alcan   | 6.8         |             |                  |
| Sahar Petrochem   | 0.2         |             |                  |
| <b>Debt</b>       | <b>41.4</b> | <b>11.0</b> | <b>63%</b>       |
| <b>Total</b>      | <b>65.8</b> | <b>17.5</b> | <b>100%</b>      |

Source: Company data, Credit Suisse estimates

**Figure 6: CAPEX timeline (including partner shares)**

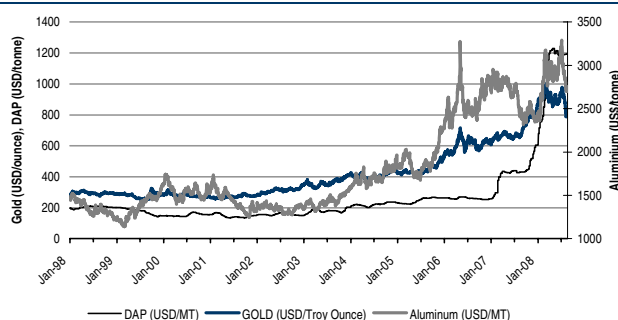


Source: Company data, Credit Suisse estimates

## Diversification to reduce cash-flow cyclicality

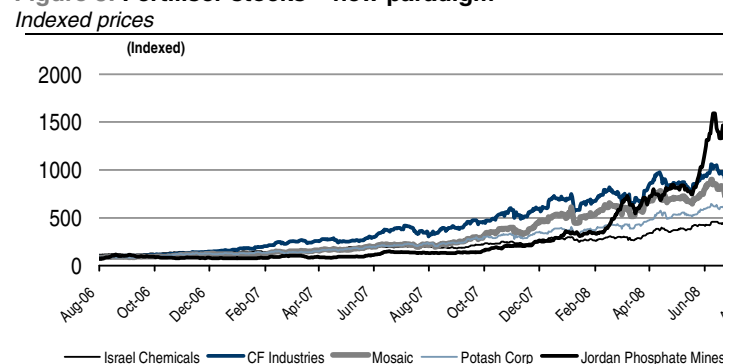
If global GDP were to slow, metal demand could be very negatively affected. Ethylene, PVC and other materials prices could potentially see a significant negative impact as well. Fertiliser demand, however, could be less negatively affected, as higher consumption rates for fertilisers is generally resulting from higher living standards seen with higher GDP levels experienced by developing countries. The impact those drivers have on food demand unwinds quite slowly. The fundamentals that drive global agriculture appear robust and long-lasting, and fertiliser demand is central to those drivers. Fertiliser stocks have been in a growth phase and we think they should exhibit unusually strong defensive characteristics relative to their history. Gold's historical status as a value-haven could enhance Ma'aden's image as a defensive play. Adding aluminium into the product mix means three production lines working on different commodity cycles.

**Figure 7: Three commodities with different price cycles**



Source: the BLOOMBERG PROFESSIONAL™ service

**Figure 8: Fertiliser stocks – new paradigm**



Source: the BLOOMBERG PROFESSIONAL™ service

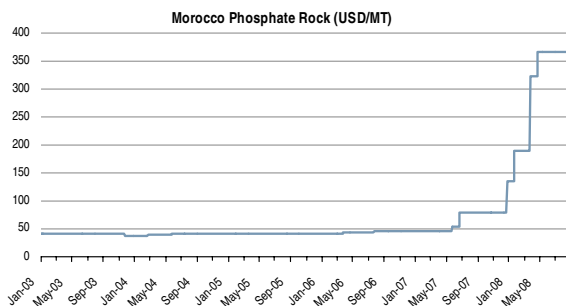
## Strong international partners and domestic support

The participation of Rio Tinto Alcan and SABIC with Ma'aden in the aluminium and phosphate fertiliser projects, respectively, should decrease implementation risks and provide the necessary technology and know-how. This, combined with having Saudi Aramco as a supplier of oil and natural gas and the Saudi Electricity Company to manage power facilities, should potentially mitigate any execution risk. Other support in addition to these is that the Saudi government allocated fuel for the power station and natural gas for the ammonia plant; made a significant subsidy for the connection of the power supply at Ras Zavr to the public electricity network; supported important infrastructure such as port and railway facilities; and provided industrial and residential land at the Ras Al-Zavr site. For the phosphate project, Ma'aden entered into a licence agreement with Yara for provision of technology rights and designs for process technology for production of phosphoric acid, and another agreement with Incro S.A. for the same sorts of provisions for DAP facilities.

## Fully integrated phosphate rock to fertiliser operation

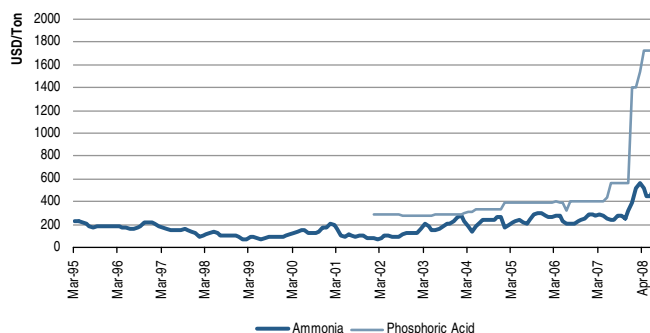
We believe Ma'aden's business model makes it well poised to be at the bottom the cost curve due to 1) access to phosphate rock that is 2) railroad linked to a fully integrated fertiliser complex that allows Ma'aden to produce its own ammonia and sulphuric acid using low-cost natural gas and sulphur feedstock procured from Aramco. We have not been provided purchasing cost estimates for these commodities, but based on the company's production cost data, we can back out estimates showing deep discounts to world prices, not to mention that freight and shipping costs will not be incurred because the chemical complex will be located close to oil and gas production and shipping facilities.

**Figure 9: Prices of phosphate rock have risen**



Source: the BLOOMBERG PROFESSIONAL™ service

**Figure 10: And so have those for phosphoric acid and ammonia**



Source: Yara

## Not firing on all cylinders before 2012–13

The bulk of what we estimate as Ma'aden's value comes from projects yet to start. We expect the phosphate and aluminium operations to begin initial ramp up in early 2011 and mid-2012, respectively. In addition, it is possible for production to require a few more years to reach high operational rates and lower production costs, as operations accumulate experience.

# Valuation

We value Ma'aden at SAR 36.57/share using a finite DCF model with a WACC of 9% over the company's expected production life. We do not use peer group multiples at this time for the following reasons: 1) Ma'aden's gold business, based on current proved and probable reserves, has a short production life compared to other global companies, which have, on average, over 20 years of reserve life. Based on a gold miner peer group multiple, we reach an estimated stand-alone value for the gold operations that is 42% higher than our finite DCF model. 2) For the DAP and aluminium businesses, the company is unlikely to see cash flows for at least 3–4 years from now. So, in our view, a DCF methodology provides a more accurate valuation for the company given its current operational status.

## Other assumptions are as follows.

- SAR/US\$ exchange rate of SAR 3.75/US\$1.
- We don't account for additional value that could potentially arise if Ma'aden succeeds in reinvesting cash flows in new projects/acquisitions.
- Sales, EBITDA and other income/cash flow figures are based on partially consolidating Ma'aden's share in units' earnings—that is, 100% for gold, 70% for PhosCo and 51% for aluminium.
- Ma'aden has a strong cash position post its IPO. Our valuation omits sources of other/interest income from cash or short-term investments on its balance sheet.

## Key risks to current valuation

**Commodity:** A price-depressed commodity environment will likely have a negative effect on Ma'aden's revenues, cash flows and valuation.

**Foreign exchange:** While currently non-existent, given both dollar-priced commodities and a dollar-pegged Saudi Riyal, any future change in the Saudi currency regime might cause an appreciation in the Saudi Riyal exchange rate (at least in the short/mid term), subsequently reducing the value of the firm's cash flow and value in Saudi Riyal.

**Corporate governance/government interference:** Ma'aden is 50% government owned (through the public investment fund), which allows it to appoint five members, including the chairman, out of the nine members of the board of directors. The Saudi government has been instrumental in providing critical success factors to the company's planned projects; however, the government's controlling interest gives it leeway to potentially steer the company in a direction viewed as being coherent with Saudi public interests. Also, if theoretically the Kingdom could implement regulations putting the mining industry at a disadvantage, this could be reminiscent of what occurred years ago in the US, when environmental regulations stopped several mining operations. Alternatively, it might theoretically adopt protectionist policies, such as those seen in China.

**Project cost-escalation:** With a large amount of greenfield investment likely to be completed during 2009–12, cost escalation risk is possible. However, this risk is largely mitigated for the phosphate project, as 70% of capital costs are locked in via turnkey projects. However, this is more of an issue for the aluminium project, due to potentially high capital costs.

**Railroad delay:** Due to its closer commissioning date, the ramp-up of the phosphate operations could be exposed to delays or cost increases (if the company reverts to the back-up plan to use trucks) if the railway project is not ready in time to transport phosphate concentrates from Al-Jalamid to the fertiliser complex.

**China's policy reversal:** Faced with rising inflation, concerns over food security, severe weather storms, the recent earthquake in Sichuan and a perception of phosphate as a strategic natural resource, China resorted to imposing a tariff of 135% on fertiliser exports to curb outward trade. If China reversed its stance on fertilisers any time in the future, domestic producers could potentially bring 'swing' supply to DAP markets, possibly negatively affect DAP prices.

## Consolidated forecasts

Figure 11: Consolidated forecasts

|                            |       | 2008E          | 2009E          | 2010E          | 2011E          | 2012E        | 2013E        | 2014E        |
|----------------------------|-------|----------------|----------------|----------------|----------------|--------------|--------------|--------------|
| EBITDAX-Gold Division      | SAR m | 512            | 586            | 598            | 518            | 438          | 266          | 169          |
| EBITDA-Aluminum            | SAR m | -              | -              | -              | -              | 1,011        | 2,051        | 2,051        |
| EBITDA-Phosco              | SAR m | -              | -              | -              | 3,149          | 4,528        | 5,317        | 5,317        |
| G&A                        | SAR m | 100            | 108            | 120            | 128            | 140          | 140          | 140          |
| <b>Consolidated EBITDA</b> |       | <b>412</b>     | <b>478</b>     | <b>478</b>     | <b>3,539</b>   | <b>5,837</b> | <b>7,494</b> | <b>7,397</b> |
| Income Tax                 | SAR m | 10             | 12             | 12             | 88             | 146          | 187          | 185          |
| <b>Capex</b>               | SAR m | <b>8,541</b>   | <b>9,840</b>   | <b>8,187</b>   | <b>4,507</b>   | <b>3,733</b> | <b>11</b>    | <b>8</b>     |
| <b>Free Cash Flow</b>      | SAR m | <b>(8,139)</b> | <b>(9,375)</b> | <b>(7,721)</b> | <b>(1,057)</b> | <b>1,959</b> | <b>7,296</b> | <b>7,204</b> |

Source: Credit Suisse estimates

Figure 12: Company valuation

|                          | 9.0%              |                  |
|--------------------------|-------------------|------------------|
|                          | Total             | Per share        |
|                          | Millions SAR      | SAR/share        |
| <b>NPV Cash Flow</b>     | SAR 21,932        | SAR 23.71        |
| Proceeds from IPO        | SAR 9,100         | SAR 9.84         |
| + Cash                   | SAR 2,695         | SAR 2.91         |
| +Other Assets            | SAR 461           | SAR 0.50         |
| -liabilities             | SAR 364           | SAR 0.39         |
| <b>NAV</b>               | <b>SAR 33,824</b> | <b>SAR 36.57</b> |
| Shares Outstanding       | 925               |                  |
| Value per share (SAR/sh) | 36.57             |                  |
| Current Share Price      | 24.75             |                  |
| Upside Potential         | 48%               |                  |

Source: Credit Suisse estimates

Figure 13: Stock undervalued if you incorporate further years into visibility

|                     |              |              |              |              |              |              |
|---------------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Current Price       | 24.75        |              |              |              |              |              |
| Current EV          | 28,466       |              |              |              |              |              |
|                     | <b>2008E</b> | <b>2009E</b> | <b>2010E</b> | <b>2011E</b> | <b>2012E</b> | <b>2013E</b> |
| Current EV/EBITDA   | 69.1         | 59.6         | 59.5         | 8.0          | 4.9          | 3.8          |
| Cash-flow per share | 0.64         | 0.45         | (0.10)       | 2.05         | 5.13         | 6.94         |
| EPS                 | 0.50         | 0.31         | (0.24)       | 0.39         | 3.18         | 4.90         |
| P/E                 | 49.32        | 80.15        | NA           | 62.99        | 7.78         | 5.05         |

Source: Credit Suisse estimates

## Sensitivity

As we forecast PhosCo's EBITDA to account for around 75% of group EBITDA in 2012, the share value would be most sensitive to changes in DAP prices.

Figure 14: Current DAP prices are near US\$1,200/tonne. Ma'aden is an agricultural play, we use US\$677 as a base case

|                              |       |       |       |       |              |       |       |
|------------------------------|-------|-------|-------|-------|--------------|-------|-------|
| LT DAP assumption (\$/tonne) | 300   | 400   | 500   | 600   | <b>677</b>   | 800   | 900   |
| Share value (SAR/sh)         | 14.9  | 20.6  | 26.4  | 32.1  | <b>36.6</b>  | 43.6  | 49.4  |
| 2012E EBITDA (SAR m)         | 3,316 | 3,984 | 4,653 | 5,322 | <b>5,837</b> | 6,660 | 7,329 |
| Current EV/2012E EBITDA      | 6.1   | 5.1   | 4.3   | 3.8   | <b>3.5</b>   | 3.0   | 2.8   |

Source: Company data, Credit Suisse estimates

## Valuation checks

Ma'aden's unique mix of businesses and the fact that the company's cash flows will be long duration in nature and starting post 2011 bring complications to cross-checking our valuations. However, we present each business segment relative to a peer group to address this. We estimate the value of the stand-alone gold business to be around SAR 2,273m using our DCF model. We don't believe the stand-alone values reached for the phosphate and aluminium projects would be as meaningful due to the operational interdependency and logistical integration arising from a shared use of the port and railway structure, which accounts for over 30% of total phosphate project's operational costs. For example, if the aluminium project did not exist, a higher portion of fixed railway and port costs would be allocated to the phosphate project, thus affecting its valuation.

## Gold business

The NPV of the unit's cash flows are at SAR 2,273m, not taking account of the salvage value of machinery or other assets/cash/investment existing on the company's books as a gold miner. The unit currently has no borrowings to net off against its NPV.

**Figure 15: Credit Suisse valuation of global gold miners (pricing as at close on 2/09/08)**

| Company            | Ticker  | EV/EBITDA |       |
|--------------------|---------|-----------|-------|
|                    |         | 2008E     | 2009E |
| South Africa       |         |           |       |
| Gold Fields        | GFIJ.J  | 3.5       | 3.8   |
| Harmony Gold       | HARJ.J  | 9.0       | 3.8   |
| Canada             |         |           |       |
| Alamos             | AGI.TO  | 4.7       | 4.0   |
| Gammon GAM         | GAM.TO  | 9.5       | 6.1   |
| Yamaha Gold        | YRI.TO  | 6.7       | 4.4   |
| Golden Star        | GSC.TO  | 6.3       | 1.3   |
| Agnico-Eagle       | AEM.TO  | 27.9      | 13.8  |
| GoldCorp           | G.TO    | 16.3      | 10.3  |
| Northgate Minerals | NGX.TO  | (1.0)     | 1.7   |
| Kinross            | K.TO    | 12.4      | 6.5   |
| Australia          |         |           |       |
| Lihir              | LGL.AX  | 10.5      | 4.9   |
| Newcrest           | NCM.AX  | 8.0       | 5.8   |
| USA                |         |           |       |
| Newmont            | NEM     | 6.8       | 5.4   |
| Barrick Gold       | ABX     | 6.8       | 5.8   |
| China              |         |           |       |
| Sino Gold          | SGX.AX  | 24.3      | 7.5   |
| Zijin Mining       | 2899.HK | 4.4       | 3.2   |
| Average            |         | 9.8       | 5.5   |

Source: Credit Suisse estimates and research

Applying the 2009E peer group average EV/EBITDA of 5.5x to the gold unit's 2009E EBITDA forecast of SAR586m we arrive at an estimated enterprise value of 3,239m, 42% above our DCF output of SAR 2,273m.

## Aluminium business

Aluminium stocks tend to trade around a mean EV/ FY1 EBITDA in the long term, depending on changing prices of the commodity and its production costs. Consequently, the issue is how this affects margins achieved. Over a seven-year period that captures a business cycle, the historical EV/FY1 EBITDA series for a group of pure aluminium plays averaged around 5.77x (see Figure 16 and Figure 17).

Applied to our expected long-term EBITDA of SAR 2,051m, we reach a total EV of SAR11,833m, significantly higher than our stand-alone DCF estimate (see below), which we believe is due to the following:

1. Ma'aden having the most modern facility, with a higher amount of invested capital utilised reflecting capital equipment inflation relative to other producers with existing equipment (smelter building costs were historically US\$3,000/t but have risen recently to US\$5,000/t; Ma'aden's building costs were at the very top of the range at US\$5,050/t; longer term, as more producers move towards newer builds, the commodity price should start reflecting new floors).
2. Valuation multiples reflect higher prices for aluminium than Credit Suisse estimates (we are 8% below consensus).
3. The aluminium project has potentially lower WACC than the overall company due to steadier cash flows and higher debt component (75%), which could bring down the discount rate.

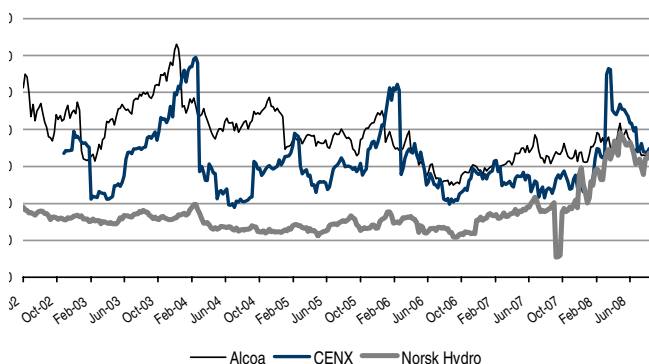
Our analysis in Figure 16 indicates that AlumCo represents a call option on the price of aluminium: an 8% increase from our forecast was more than enough to place the project in the money. As more of global producers move to newer equipment, the commodity should move towards level where new capacities should earn sufficient return on capital.

**Figure 16: AlumCo's valuation under Credit Suisse and consensus aluminium forecasts**

|                                             | Credit Suisse | Consensus |
|---------------------------------------------|---------------|-----------|
| LME Aluminium Price \$/tonne                | 2,424         | 2,625     |
| Firm's target leverage                      | 50%           |           |
| Leverage for the aluminium project          | 75%           |           |
| Cost of equity                              | 12%           |           |
| Cost of Debt                                | 6%            |           |
| Firmwide WACC                               | 9%            |           |
| WACC for the aluminium project              | 7.5%          |           |
| AlumCo's valuation 9%                       | (1,190)       | 1,054     |
| AlumCo's valuation 7.5%                     | 1,878         | 4,629     |
| <b>Valuation using peer group multiples</b> |               |           |
| Peer Group Average EV/EBITDA                | 5.77          |           |
| Long term EBITDA                            | 2,051         |           |
| Peer multiple based valuation               | 11,833        |           |

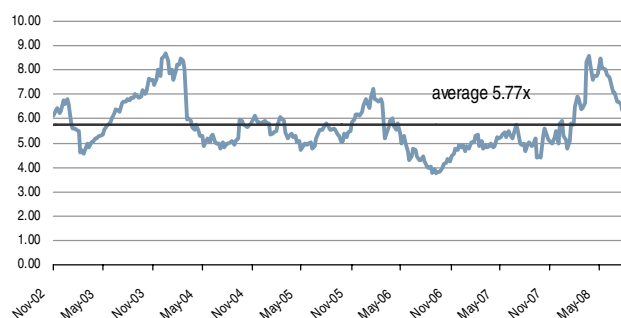
Source: Company data, Credit Suisse estimates, the BLOOMBERG PROFESSIONAL™ service

**Figure 17: Historical EV/forward EBITDA for a peer group**



Source: the BLOOMBERG PROFESSIONAL™ service

**Figure 18: Movement of a combined average**



Source: © Datastream International Limited ALL RIGHTS RESERVED

## Phosphate business

As previously mentioned, fertiliser stocks have been experiencing higher volatilities after the rally witnessed this year. We expect robust earnings to be maintained for the next 2 years. Figure 19 highlights some metrics related to part of Credit Suisse's fertiliser stock coverage with exposure to phosphates. Our analysts globally forecast higher and steadier earnings for global fertiliser names.

**Figure 19: Sample of Credit Suisse covered companies with phosphate fertiliser exposure**

|                                           | Dec 07A | Dec 08E | Dec 09E  | Dec 10E | Currency | CS Analyst(s)            |
|-------------------------------------------|---------|---------|----------|---------|----------|--------------------------|
| <b>Potash Corporation of Saskatchewan</b> |         |         |          |         |          |                          |
| EBITDA--CS estimate                       | 1,880   | 6,012   | 9,835    | NA      | USD      | Mark W. Connelly         |
| EBITDA Growth                             |         | 220%    | 64%      |         |          |                          |
| EV                                        | 52,810  |         |          |         |          | <b>Rating NEUTRAL</b>    |
| EV/EBITDA                                 |         | 8.8     | 5.4      | NA      |          |                          |
| EPS                                       | 3.40    | 12.35   | 20.67    | 0.00    |          |                          |
| <b>Israel Chemicals</b>                   |         |         |          |         |          |                          |
| EBITDA--CS estimate                       | 909     | 3,628   | 5,860    | 6,282   | USD      | Semyon Mironov           |
| EBITDA Growth                             |         | 299%    | 61%      | 7%      |          | Nurlan Zhukhapov         |
| EV                                        | 21,660  |         |          |         |          | <b>Rating OUTPERFORM</b> |
| EV/EBITDA                                 |         | 6.0     | 3.7      | 3.4     |          |                          |
| EPS                                       | 0.43    | 2.16    | 3.75     | 4.42    |          |                          |
| <b>CF Industries</b>                      |         |         |          |         |          |                          |
| EBITDA--CS estimate                       | 686     | 1,523   | 1,815    | NA      | USD      | Mark W. Connelly         |
| EBITDA Growth                             |         | 122%    | 19%      |         |          |                          |
| EV                                        | 7,386   |         |          |         |          | <b>Rating OUTPERFORM</b> |
| EV/EBITDA                                 |         | 4.9     | 4.1      |         |          |                          |
| EPS                                       | 6.75    | 15.80   | 19.02    |         |          |                          |
| <b>Mosaic Co</b>                          |         |         |          |         |          |                          |
| EBITDA--CS estimate                       | 3327.50 | 9426.54 | 10348.19 | NA      | USD      | Mark W. Connelly         |
| EBITDA Growth                             |         | 183%    | 10%      |         |          |                          |
| EV                                        | 42995   |         |          |         |          | <b>Rating OUTPERFORM</b> |
| EV/EBITDA                                 |         | 4.6     | 4.2      |         |          |                          |
| EPS                                       | 4.68    | 14.30   | 16.11    |         |          |                          |

Source: Credit Suisse estimate and research

The NPV of the phosphate operations is 24,495, a multiple of 4.8x of our estimated long-term derived base case EBITDA, which compares reasonably to the above group's multiples, which range between 3.7x and 5.4x. We also believe the following factors can potentially improve Ma'aden's valuation once production reaches full ramp-up: 1) The peer group valuations reflect higher fertiliser prices in general, for the coming two years, as our forecast for long-term DAP prices are below those for short/mid term prices. 2) We estimate Ma'aden's project should have more lucrative EBITDA margins versus other global producers.

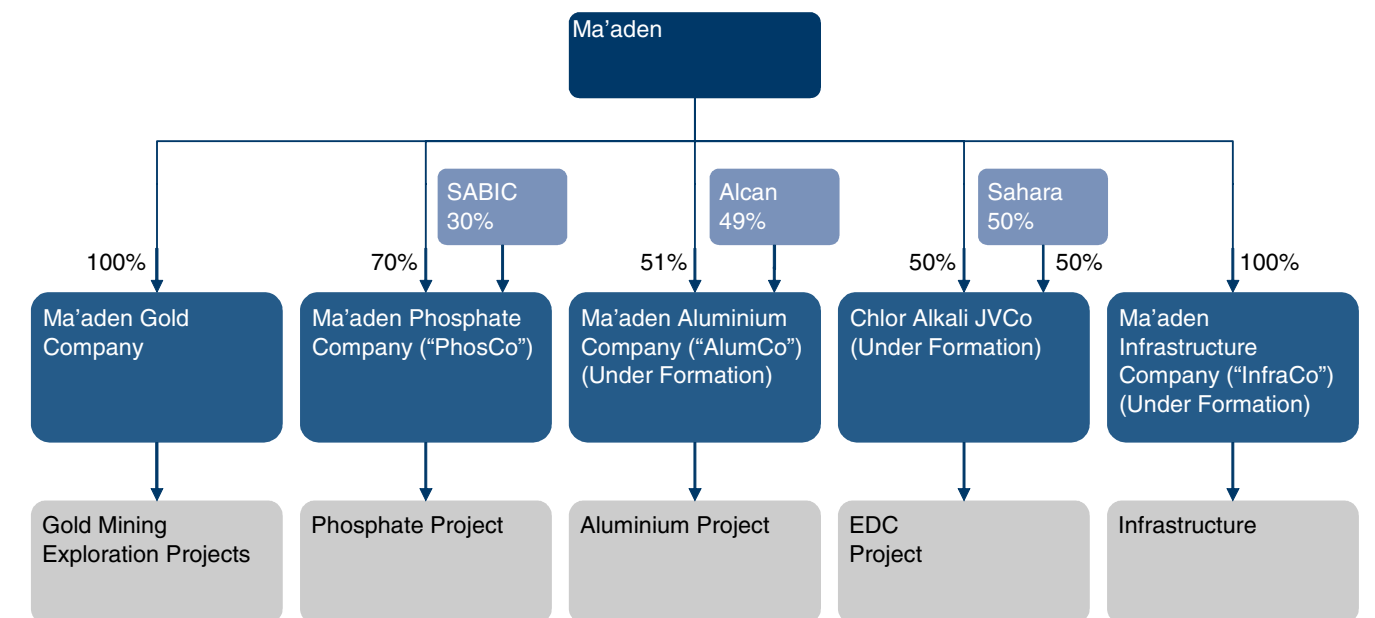
## Company background

Ma'aden was formed in 1997 to facilitate the development of Saudi Arabia's mineral resources after acquiring the stakes of Petromin (and Boliden Mineral S.P.'s share in 1999) in the Saudi Mining Company for Precious Metals (SCPM). After expanding its operations to five gold mines, Ma'aden is diversifying into developing the Kingdom's phosphates and aluminium resources. Ma'aden was fully government-owned before floating 50% of its shares on the Saudi Stock Exchange (Tadawul) on 28 July 2008. The government did not receive any of the proceeds, which were invested back into the company to finance future projects as a means of distributing wealth to Saudi citizens. The Saudi government expressed its strategic objective for Ma'aden to be the "third pillar" of Saudi industry (the first being Saudi Aramco, a non-listed government-owned entity and the world's largest oil producer, with 2006 revenues of over SAR 630bn, and the second being SABIC, the world's ninth-largest chemicals company, with a current market cap of SAR 381bn).

## Structure to facilitate jointly operating projects with global partners such as Rio Tinto and SABIC

Ma'aden's new projects will follow a model whereby business segments are organised into separate subsidiaries to facilitate joint ventures with strategic partners. Ma'aden management's role will focus on procuring critical inputs and obtaining legal licences while JV partners will provide the projects with management personnel, technology and know-how, training, research and marketing of the final output outside of Saudi Arabia.

**Figure 20: Company structure**



Source: Company data,

# Overview of assets

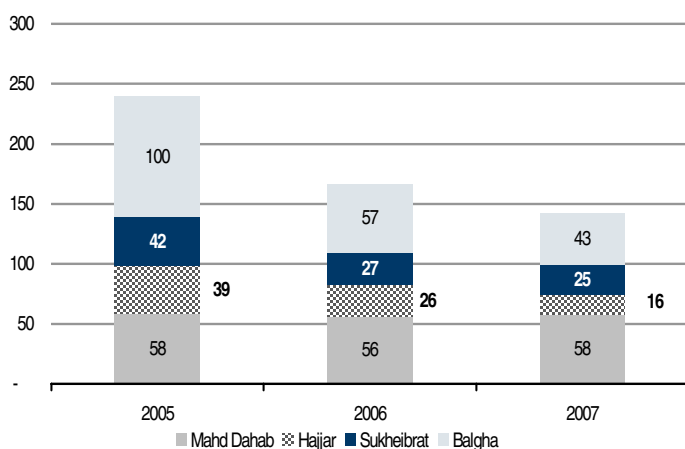
## Gold operations (Ma'aden Gold Company)

Currently, Ma'aden is focused on gold mining, with operations at five working mines: Mahd Dahab, Hajjar, Sukheibrat, Balgha and Al-Amar (which came online in January 2008). Ma'aden produced 144k ounces of gold in 2007, down from 167k ounces in 2006. The gold unit's activities include exploration, development, operating mines and the metallurgical complex. According to the company, the main customers for Ma'aden's gold production were JP Morgan, Barclays Bank and Umicore, comprising over 93% of the company's 2007 sales.

In 1998, Ma'aden was granted the licence to explore prospects in the Dowaishi sight, in an area known as the Central Arabian Gold Region (CAGR). After exploration work, the company was able to locate several gold reserves within the concession by 2003. The company's original estimates indicated around 7.93m ounces of gold at grades of 2.4g/t in that area. A pre-feasibility study was conducted for development of Al-Duwaihi through building a 1m tonnes/year of ore processing facility at a cost of US\$92m which demonstrated the viability of the project. However, development of the necessary infrastructure costing an additional US\$92m is a prerequisite for proceeding with such a project, we believe. Due to this, Ma'aden will not classify any of the Duwaihi resource estimates under reserves until further studies confirm the mine's economic viability. Our gold unit cash-flow forecasts do not incorporate effects of such developments. We await further information from management, noting that some of the studies were conducted in early 2007, at which point gold traded at c.US\$650/ounce.

In addition, the company has five locations categorised as advanced exploration sites. Moreover, Ma'aden has said it intends to allocate capital to assess the economic and technical feasibility of developing the Central Arabian Gold Region.

**Figure 21: Gold production by mine**  
Thousand ounces

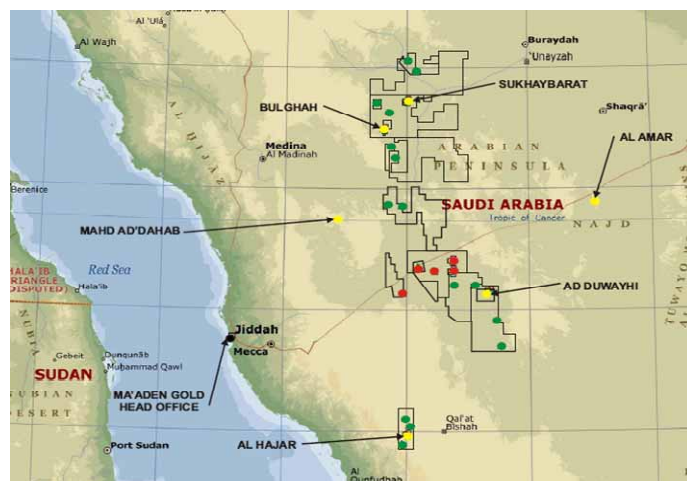


Source: Company data, Credit Suisse estimates

### Production

Gold production is accompanied by other precious and base metals, mainly silver, zinc, copper and lead. Sales from these by-products are accounted for as a reduction to the gross cash production costs. We expect 2008 gold production to pick up from 2007 levels (see Figure 24:) as Ma'aden increases amounts of ore processed and encounters higher-grade, on average, gold content to reach approximately 180k ounces of gold between 2008–10, due to the new production out of the new Al-Amar mine. Our forecast is based

**Figure 22: Ma'aden's gold operations**

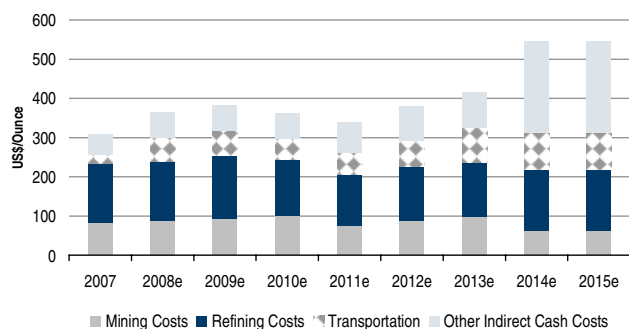


Source: Encarta, Company data

on production out of proved and probable reserves, which provides us with an estimated 13 years of production life. We have not yet received any updates on the gold division regarding drilling results and reserves classification. We expect further reserve bookings and reassessment of previous studies carried out few years ago to prompt the company to consider moving ahead with other proposed projects as their economics improve.

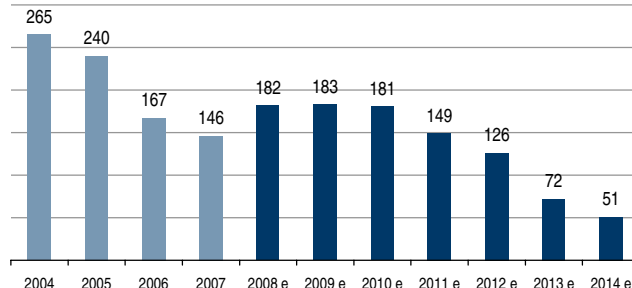
On the cost side, we expect gross cash production costs (before by-product credits) to rise from 2007 levels. This is due to transport and overhead cost increases, and based on total gross production costs ranging between US\$339/ounce and US\$383/ounce for 2008–11, before picking up again post 2011, as relatively fixed overheads will be allocated over fewer units produced.

**Figure 23: Gold per unit cash cost forecast**



Source: Company data, Credit Suisse estimates

**Figure 24: Gold production forecast (thousand ounces)**



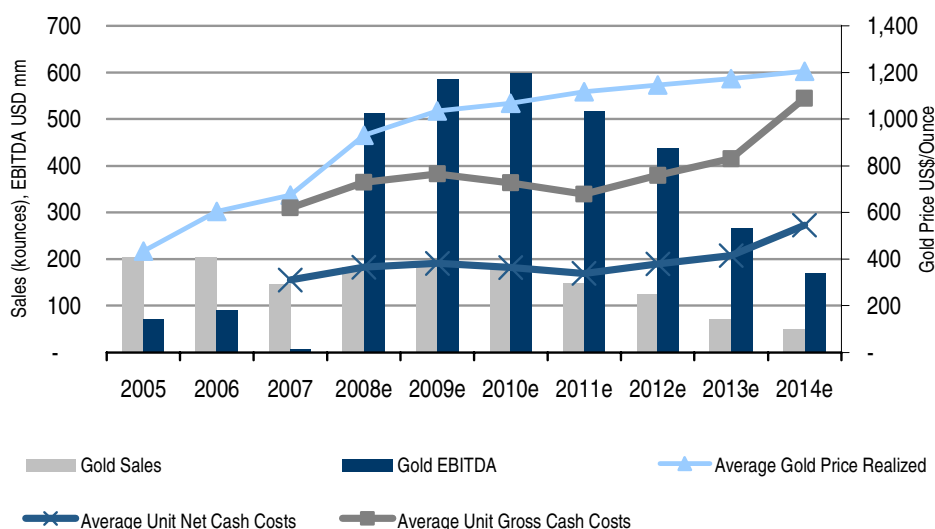
Source: Company data, Credit Suisse estimates

## Forecasts

Gold division earnings and EBITDA were wiped out in 2007 when Ma'aden decided to close out all its gold forward positions before proceeding with the IPO. These hedging positions were set at forward prices far below current market levels. This hedge book clean-up adds Ma'aden to the list of unhedged gold plays.

**Figure 25: Ma'aden – gold price assumptions vs consensus (top) and gold unit forecasts (chart)**

|              | 2008e  | 2009e  | 2010e  | 2011e  | 2012e  | 2013e  | 2014e |
|--------------|--------|--------|--------|--------|--------|--------|-------|
| CS Estimates | 950    | 1,035  | 1,068  | 1,117  | 1,145  | 1,174  | 1,205 |
| Consensus    | 914.03 | 925.00 | 825.00 | 790.00 | 727.50 | 600.00 | NA    |



Source: Credit Suisse estimates, the BLOOMBERG PROFESSIONAL™ service

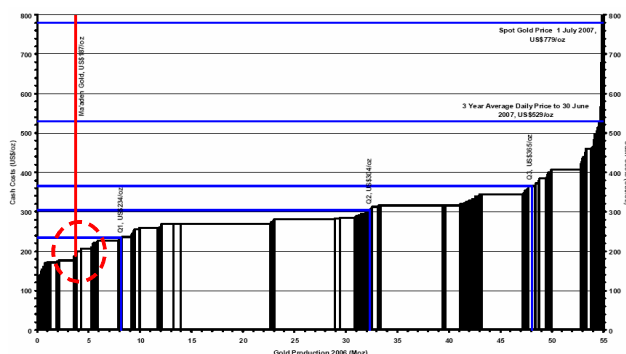
Figure 26: Gold reserves and resources as of 1 July 2007

|                                                   | Ore            | Grade       | Content       |              |
|---------------------------------------------------|----------------|-------------|---------------|--------------|
|                                                   | (kt)           | (g/tAu)     | (koz Au)      |              |
| <b>Ore Reserves</b>                               |                |             |               |              |
| <b>Proved</b>                                     |                |             |               |              |
| Mahd Ad'Dahab                                     | 447            | 10.6        | 153           |              |
| <b>Total Proved</b>                               | <b>447</b>     | <b>10.6</b> | <b>153</b>    | <b>A</b>     |
| <b>Probable</b>                                   |                |             |               |              |
| Mahd Ad'Dahab                                     | 792            | 7.6         | 194           |              |
| Al Amar                                           | 1,350          | 9.9         | 429           |              |
| Bulghah                                           | 16,768         | 0.8         | 428           |              |
| Sukhaybarat                                       | 164            | 0.4         | 2             |              |
| Al Hajar                                          | 2,143          | 1.3         | 87            |              |
| <b>Total Probable</b>                             | <b>21,217</b>  | <b>1.7</b>  | <b>1,140</b>  | <b>B</b>     |
| <b>Total Reserves</b>                             | <b>21,664</b>  | <b>1.9</b>  | <b>1,293</b>  | <b>A+B</b>   |
| <b>Mineral Resources</b>                          |                |             |               |              |
| <b>Measured</b>                                   |                |             |               |              |
| Mahd Ad'Dahab                                     | 344            | 21.3        | 235           |              |
| Ad Duwayhi                                        | 7,222          | 2.8         | 648           |              |
| <b>Total Measured Resources</b>                   | <b>7,566</b>   | <b>3.6</b>  | <b>883</b>    | <b>C</b>     |
| <b>Indicated Resources</b>                        |                |             |               |              |
| <b>Operating Sites</b>                            |                |             |               |              |
| Mahd Ad'Dahab                                     | 727            | 13.4        | 313           |              |
| Al Amar                                           | 1,864          | 11.3        | 679           |              |
| Bulghah                                           | 21,537         | 0.8         | 561           |              |
| Sukhaybarat                                       | 164            | 0.4         | 2             |              |
| Al Hajar                                          | 2,143          | 1.3         | 87            |              |
| <b>Development and Advanced Exploration Sites</b> |                |             |               |              |
| Ad Duwayhi                                        | 6,359          | 5.7         | 1,169         |              |
| Advanced Exploration Projects                     | 31,635         | 2.3         | 2,369         |              |
| <b>Total Indicated</b>                            | <b>64,429</b>  | <b>2.5</b>  | <b>5,180</b>  | <b>D</b>     |
| <b>Total Measured + Indicated</b>                 | <b>71,995</b>  | <b>2.6</b>  | <b>6,064</b>  | <b>C+D</b>   |
| <b>Total Inferred Resources</b>                   | <b>60,767</b>  | <b>2</b>    | <b>3,940</b>  | <b>E</b>     |
| <b>Total Mineral Resources</b>                    | <b>132,762</b> | <b>2.3</b>  | <b>10,004</b> | <b>C+D+E</b> |

Source: Company data,

Brook Hunt rated Ma'aden favourably on the global production curve, ranking it 18<sup>th</sup> based on net cash production costs (after netting by product revenues against gross cash costs).

Figure 27: Gold cash costs curve, 2006



Source: Company data, Brook Hunt

## Expansion projects

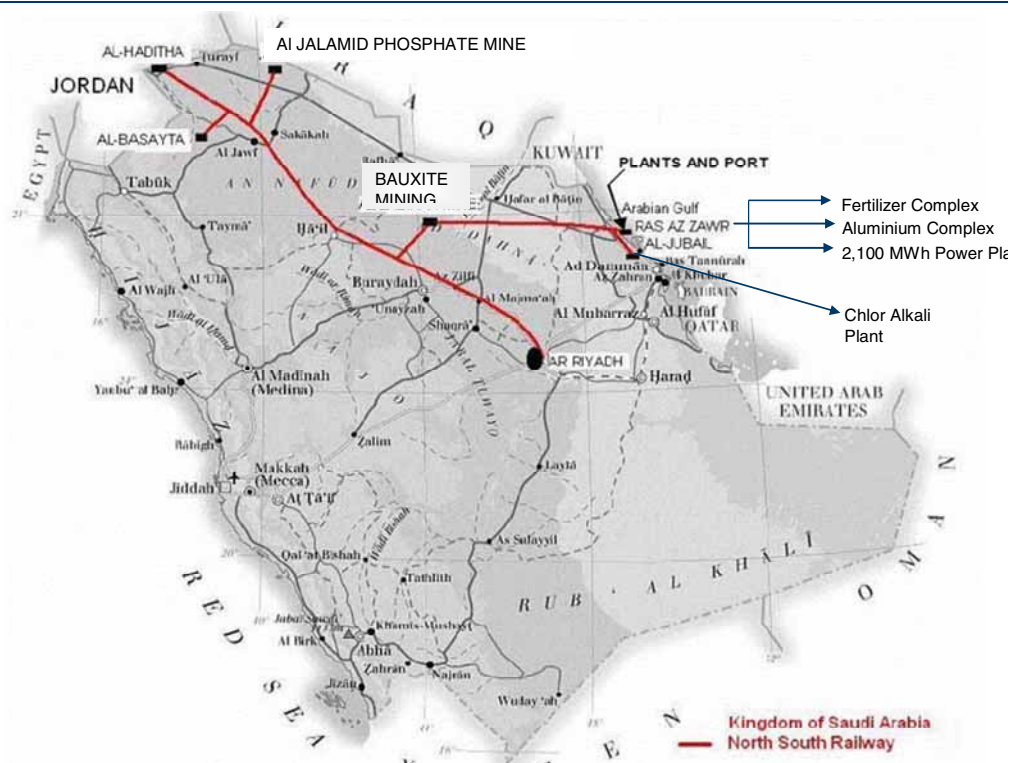
With over SAR 65m (US\$17.5bn) of projects in the pipeline, we believe Ma'aden is set to transform itself from a standalone gold miner to become a fully vertically integrated aluminium and DAP producer.

**Figure 28: Expansion projects to be implemented between 2008–12**

| Project                    | Capex       | Capex       | Ownership  |                  |
|----------------------------|-------------|-------------|------------|------------------|
|                            | (SAR bln)   | (USD bln)   | Percentage | Partner          |
| Phosphate Projects         | 20.9        | 5.6         | 70%        | SABIC            |
| Aluminum Project           | 39.6        | 10.5        | 51%        | Rio Tinto Alcan  |
| Chlor Alkali               | 1.5         | 0.4         | 50%        | Sahara Petrochem |
| Infrastructure             | 0.9         | 0.2         |            |                  |
| Magnesite                  | 0.2         | 0.1         |            |                  |
| Low Grade Bauxite & Kaolin | 0.0         | 0.0         |            |                  |
| Other                      | 2.7         | 0.7         |            |                  |
| <b>Total</b>               | <b>65.8</b> | <b>17.5</b> |            |                  |

Source: Company data, Credit Suisse research

**Figure 29: Project locations within Saudi Arabia**



Source: Company data, Credit Suisse research

## The phosphate project (PhosCo)

(70/30 JV with SABIC)

In September 2007, Ma'aden agreed a partnership with SABIC to operate the phosphate project through the jointly owned Ma'aden Phosphate Company (PhosCo). SABIC, which will hold a 30% stake in the partnership, will be responsible for marketing the bulk of Diammonium Phosphate and the Ammonia excess in major consuming markets, mainly India, Pakistan, Taiwan and South Korea. SABIC will purchase phosphoric acid surpluses resulting from the project in the first years of production.

This project aims at exploiting the vast phosphate reserves of the Al-Jalamid mine in the north of Saudi Arabia, in addition to utilising local natural gas and sulphur (purchased from Aramco) to produce DAP, which would be exported after satisfying local demand. The project is expected by the company to produce surplus quantities of ammonia and phosphoric acid amounting to 436,000 and 162,000 tonnes per year, respectively.

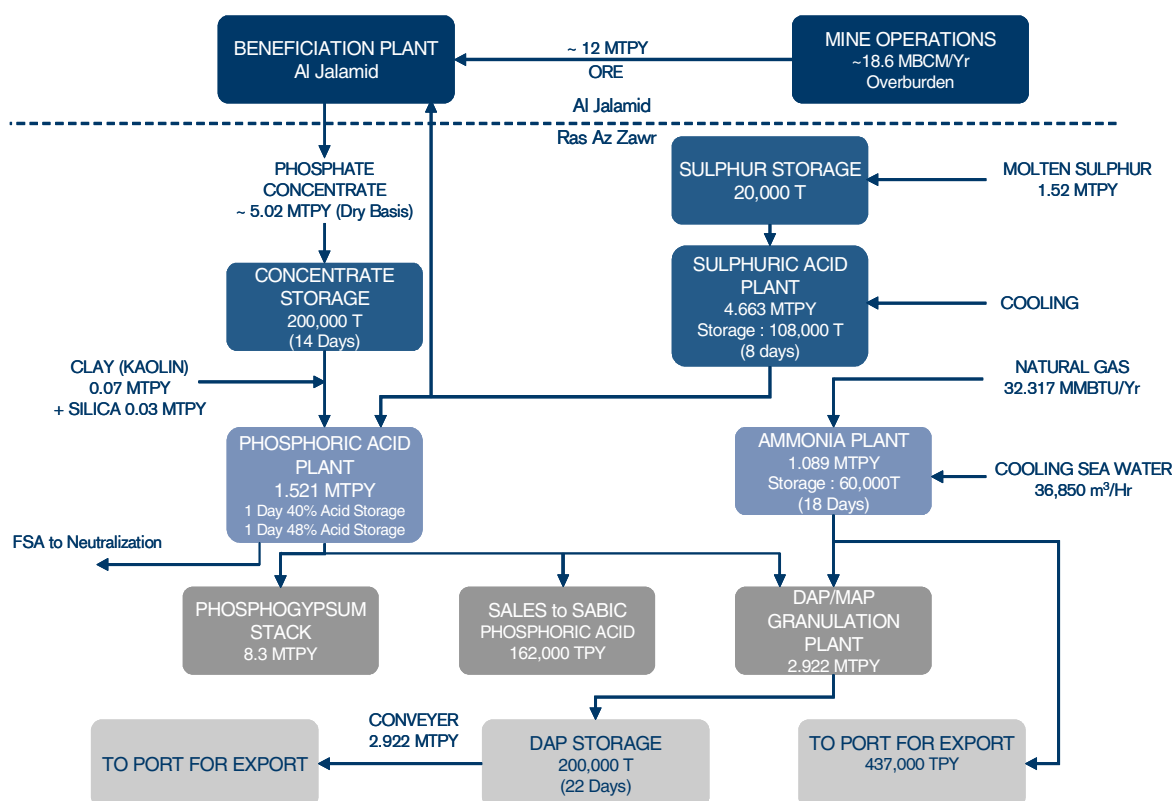
The Jalamid facilities are expected to produce phosphates at a rate of 5m tons per annum of phosphate concentrate, representing 20 years of production life. The company expects the project to produce around 2.92 tonnes per year of granular DAP, with production commencing in late 2010.

**Figure 30: Phosphate reserves/resources**

| Phosphate Resources | m tonnes |
|---------------------|----------|
| Computed Resources  | 534      |
| Proved Reserves     | 223      |

Source: Company data

**Figure 31: Phosphate project process overview**



Source: Company data

The phosphate project consists of two sites supported by the necessary infrastructure.

### Mining facilities

Located in the northern area of Jalamid, where the mine and raw materials processing facilities will be located. The company expects mining production to average circa 11 Mtpy of ore, having 20 years of production life; on a dry basis (after the mining and beneficiation processes) the production should be around 5.02 Mtpy. The Jalamid beneficiation plant will utilise grinding, washing, de-sliming, flotation and drying processes to remove calcium and magnesium carbonates from the ore and produce a phosphate concentrate suitable for use in the manufacture of wet process phosphoric acid. The beneficiation plant has a capacity of 11.6 Mtpy.

## The fertiliser complex

Hosted in Ras-Al Zour, on the east coast of the Arabian Gulf, 90km north of Jubail, with facilities to produce fertilisers. Phosphate concentrate will be transported by rail from Al-Jalamid beneficiation by rail, where the raw materials will pass through a phosphoric acid plant, a sulphuric acid plant, an ammonia plant, a DAP granulation plant, a co-generation plant and a desalination plant. Ras-Al Zour's proximity to the eastern province's oil & gas production and shipping facilities in Ras Tannora should ensure a continuous and affordable energy feedstock.

### Sulphuric acid plant

With a capacity to produce 4.66m tonnes per year of sulphuric acid to be manufactured using 1.52m tonnes of sulphur feedstock procured from Saudi Aramco, the output will be used as a feedstock for the phosphoric acid plant. The total estimated cost for building the plant on a turnkey basis is at SR 1.87bln (US\$495m), according to the company.

### Phosphoric acid plant

Phosphoric acid, a major feedstock for producing Diamonium Phosphate (DAP), will be produced in three separate factories with a total capacity of 1.52m tonnes per year using 5.02m tonnes per year of phosphate concentrate. On-site storage capacity of 200,000 tonnes will guarantee a 14-day feedstock continuity of phosphoric acid. While the bulk of phosphoric acid production will be supplied to the DAP plant, the excess will be land transported to be sold to SABIC. The total cost of the plant is approximately SAR 2bln (US\$523m).

### Ammonia plant

To be built with a design capacity of 1.09 tpy, 0.66 tonnes of which is to be used to produce 2.92 tonnes of DAP and the balance, or approximately 0.44m tonnes, to satisfy both local consumption and exports through marketing arrangements with SABIC. Natural Gas will be procured through Aramco. Total capital expenditures for the ammonia plant are estimated by the company at SR3.57bln (US\$951m).

### DAP plant

Consists of two independent dual-unit factories with a total capacity of 2.92m tonnes of DAP. The two factories will each hold a permanent DAP inventory buffer of 100,000 tonnes, representing 22 days of production. The total plant construction costs on a turnkey basis are estimated by the company at SR1.83bln (US\$486m).

## Supporting infrastructure

- Electric power and water desalination plant, with a generation capacity of 160MWh of electricity and 400k m<sup>3</sup> of desalinated water. The plant will utilise the excess vapour generated from the sulphuric acid and ammonia plants.
- Sea water cooling system: to supply sea water to heat exchange systems in the sulphuric acid plant and the desalination plant.
- Gas distribution facilities to supply the Ras-Al Zoor Site.

The total cost of the infrastructure to support the phosphate project is estimated by the company at SAR 2.83bln (US\$755m).

## Labour training

Ma'aden has instituted a plan to recruit and train the necessary workforce for both the phosphate mine and the fertiliser production facilities. The company estimates that Saudi nationals will make up circa 45% of the labour count by the time of the launch of operations in 2010, 50% in 2013 and 80% in 2019, comfortably exceeding the country's Saudisation requirements.

## Potential railroad delays

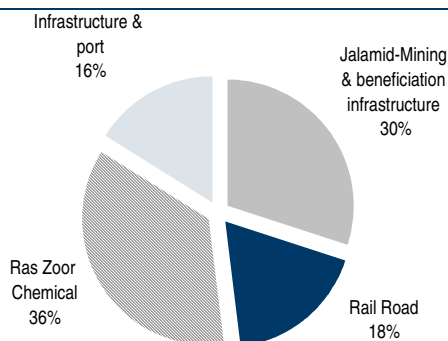
Building a desert-crossing railroad network and finishing it on time will be one of the main challenges faced by the company. Ma'aden expects the linkage between Al-Jalamid and Ras-Al Zoor to be completed by July 2009, in time to transport raw materials from mines to the chemical complex. A back-up plan has been instituted to use trucks to deliver concentrates to the chemicals plants in case the railway project is not completed on time.

The company estimates total capex for the project at SR20.85bn (US\$5.56bn), 70% of which has already been locked in through turn key EPC contracts. The two partners will contribute 30% of total project costs and the balance will be financed through limited recourse financing.

## Production economics

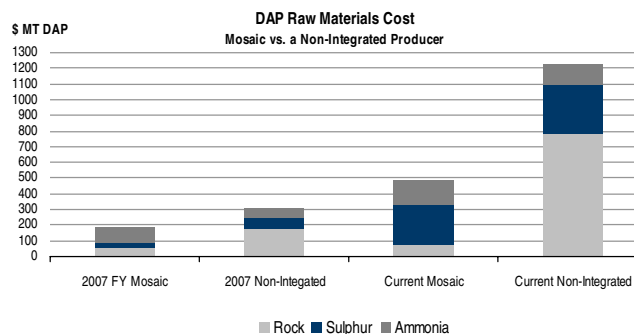
The company estimates operating expenditures for the project to average around US\$290m, or US\$98/tonne, over the first 20 years of operations. 30% of cash production costs are expected to be fixed. The facilities should produce extra quantities of ammonia and phosphoric acid, and sales of these by-products will be credited against gross cash production costs. The company estimates that the total cost of the Al-Jalamid phosphate concentrates delivered to Ras Zoor will average US\$49.3 per tonne of DAP, almost half of average total unit production costs. These costs, however, were based on estimates made earlier last year; we believe that a different commodity environment and price inputs might dictate higher opex for the company. Even taking this into consideration, though, we expect Ma'aden's overall cost structure to remain less volatile and more competitive compared to other global producers.

**Figure 32: Ma'aden's expected cost structure (forecasted in 2007)**



Source: Company data, Credit Suisse research

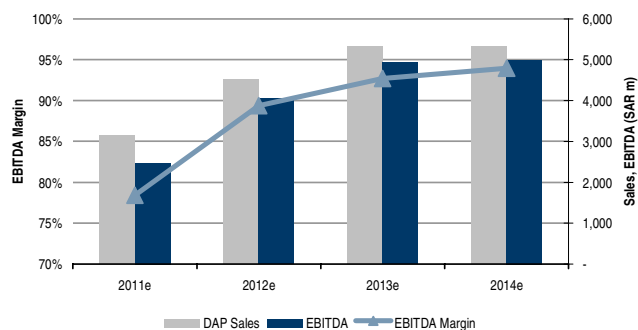
**Figure 33: Sulphur and ammonia threw off Mosaic's cost structure within a year, but look what's happening to non-integrated producers**



Source: Mosaic Q2 earnings presentation

## Forecasts

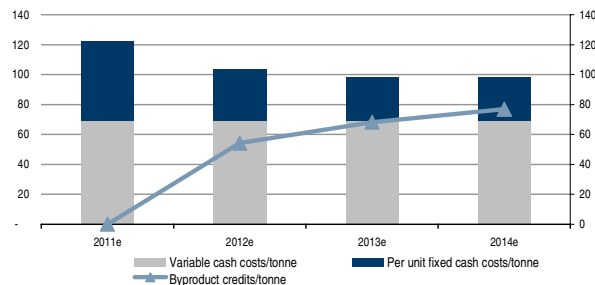
The following figures set forth our expectations and assumptions related to PhosCo's operations. We have factored in a four-month delay from the company's planned production commissioning of Q4 2010 and allowed two years for DAP production to ramp up to the planned capacity level of 2.992m tonnes of DAP/year.

**Figure 34: Ma'aden's equity share in PhosCo's sales and EBITDA**

Source: Company data, Credit Suisse estimates

**Figure 35: Price assumptions used, Cost forecasts**

|                 | 2011E | 2012E | 2013E | 2014E | 2015E |
|-----------------|-------|-------|-------|-------|-------|
| US\$/tonne      |       |       |       |       |       |
| DAP             | 727   | 677   | 677   | 677   | 677   |
| Amonia          | 230   | 230   | 230   | 230   | 230   |
| Phosphoric Acid | 800   | 800   | 800   | 800   | 400   |

**Costs to decrease with higher operating rates**

Source: Company data, Credit Suisse estimates

## Aluminium Project (AlumCo)

### (51/49) partnership with Rio Tinto Alcan

This project will focus on exploiting Ma'aden's bauxite reserves from the Zubaira mine for aluminium production in Ras Al-Zoor for both local consumption and exports. Facilities will be comprised of the following.

- Mining operations in Zubeira: consisting of mining facilities, a crusher and conveyer facility. The company is planning to use the shovel/truck terrace mining method to extract the ore from the ground, which was deemed the most appropriate for the Zubeira mines.
- Aluminium complex in Ras Al-Zoor: located 90km north of Jubail and 200km away from the Kuwaiti borders. The complex will include an alumina refinery, an alumina smelter and a dedicated electric power generation plant. The current upward trajectory of capital and operating costs has prompted many producers to increase the sizes of newly built smelters to benefit from further economies of scale. The complex will be linked via rail to the mines and is conveniently located near the port, thereby facilitating import of any necessary materials as well as product export.
- An oil-fired 2,100–2,400Mwh power plant: to supply the smelter and refinery with energy, desalinated water and vapour. This facility will be located on the Ras Al-Zoor coast. In addition, the company is planning to sign up for an additional 600Mw supply of electricity. The refinery and smelter are expected by the company to consume around 1,600MWh, which gives legroom to sell excess electricity generated back to the grid.

Bauxite output is estimated by the company at 3.5m tonnes per year to produce approximately 1.4m tonnes of alumina per year through the refinery and 0.65m tonnes of aluminium through the smelter. Further feasibility studies deemed it viable to increase production capacity to 4m tonnes of bauxite, 1.8m tonnes of alumina and 0.74m tonnes of aluminium ingot.

In April 2007, Ma'aden entered into heads of agreement with Rio Tinto Alcan, accordingly, Rio will own 49% of Ma'aden Aluminium Company. Besides that, Rio Tinto will act as an agent to sell Ma'aden's share of aluminium production outside of Saudi Arabia in return for a commission. As for sales within Saudi Arabia, Ma'aden will be the exclusive seller of Rio's share of aluminium production within the country. The venture plans to launch operations towards the end of 2012, with the agreement being finalised later this year.

The total project capex requirements, including capacity additions, are estimated by the company at SR39.56bn (US\$10.55bn). Unlike the phosphate project, where a big chunk of costs (around 75%) has been locked in through turn key EPC contracts, the costs for the aluminium facilities are more exposed to fluctuations due to potential rising capital equipment costs.

**Figure 36: Capital costs—Aluminium project**

| Facility               | Gross Capital Cost |               |
|------------------------|--------------------|---------------|
|                        | USD m              | SAR m         |
| Mining Site- Zubeira   | 220                | 825           |
| Refinery-Ras AlZoor    | 2,180              | 8,175         |
| Smelter                | 3,640              | 13,650        |
| Power Project          | 3,300              | 12,375        |
| Working Capital/others | 1,210              | 4,538         |
| <b>Total</b>           | <b>10,550</b>      | <b>39,563</b> |

Source: Company data

The company expects alumina surplus to be sold on the market and to sell excess electric power generated back to the Saudi Electricity Company at US \$24/MWh.

### Operating costs

The company has provided an estimated cash production cost of USD \$1,056/tonne of aluminium ingot. This forecast, however, was made based on a previously planned facility capacity of 650k tonnes of aluminium ingot. The new, higher planned production levels could potentially lower costs on a per unit basis.

### Forecasts

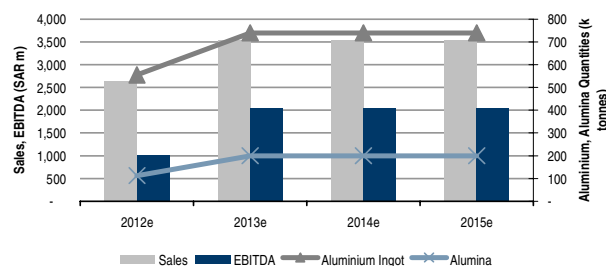
The figures below set forth our expectations and data underlying our forecasts for the aluminium division. Credit Suisse's forecast for aluminium prices are below consensus estimates. The Sales and EBITDA figures are related to Ma'aden's 51% share.

**Figure 37: Aluminium Sales, EBITDA, Price Assumptions**

|                 |            | 2012e | 2013e | 2014e | 2015e |
|-----------------|------------|-------|-------|-------|-------|
| Sales           | SAR m      | 2,637 | 3,545 | 3,545 | 3,545 |
| EBITDA          | SAR m      | 1,011 | 2,051 | 2,051 | 2,051 |
| Aluminium Ingot | k tonnes   | 555   | 740   | 740   | 740   |
| Alumina         | k tonnes   | 113   | 200   | 200   | 200   |
| CS Forecast     | US\$/tonne | 2,424 | 2,424 | 2,424 | NA    |
| Consensus       | US\$/tonne | 2,625 | NA    | NA    | NA    |

Source: Company data, Credit Suisse estimates, the BLOOMBERG PROFESSIONAL™ service

**Figure 38: Aluminium Sales, EBITDA**



Source: Company data, Credit Suisse estimates

## Risks

**Commodity:** A price-depressed commodity environment will likely have a negative effect on Ma'aden's revenues, cash flows and valuation.

**Foreign exchange:** While currently non-existent, given both dollar-priced commodities and a dollar-pegged Saudi Riyal, any future change in the Saudi currency regime might cause an appreciation in the Saudi Riyal exchange rate (at least in the short/mid term), subsequently reducing the value of the firm's cash flow and value in Saudi Riyal.

**Corporate governance/government interference:** Ma'aden is 50% government owned (through the public investment fund), which allows it to appoint five members, including the chairman, out of the nine members of the board of directors. The Saudi government has been instrumental in providing critical success factors to the company's planned projects; however, the government's controlling interest gives it leeway to potentially steer the company in a direction viewed as being coherent with Saudi public interests. Also, if theoretically the Kingdom could implement regulations putting the mining industry at a disadvantage, this could be reminiscent of what occurred years ago in the US, when environmental regulations stopped several mining operations. Alternatively, it might theoretically adopt protectionist policies, such as those seen in China.

**Project cost-escalation:** With a large amount of greenfield investment likely to be completed during 2009–12, cost escalation risk is possible. However, this risk is largely mitigated for the phosphate project, as 70% of capital costs are locked in via turnkey projects. However, the situation for the aluminium project, due to potentially high capital costs, is more problematic.

**Railroad delay:** Due to its closer commissioning date, the ramp-up of the phosphate operations could be exposed to delays or cost increases (if the company reverts to the back-up plan to use trucks) if the railway project is not ready in time to transport phosphate concentrates from Al-Jalamid to the fertiliser complex.

**China's policy reversal:** Faced with rising inflation, concerns over food security, severe weather storms, the recent earthquake in Sichuan and a perception of phosphate as a strategic natural resource, China resorted to imposing a tariff of 135% on fertiliser exports to curb outward trade. If China reversed its stance on fertilisers any time in the future, domestic producers could potentially bring 'swing' supply to DAP markets, possibly negatively affect DAP prices.

## Infrastructure

The projects will be linked by a 1,486km railroad linking the Jalamid (phosphates) and Zubeira (bauxite) sites to the Ras Al-Zoor and Jubeil sites, respectively. The railroad is due to be completed towards the end of 2009. In addition, the public ports authority will build a deepwater port capable of receiving ships with loads of up to 70,000 tonnes. Construction is due to be completed by the end of 2010.

## Other projects

### Chlor alkali plant

Caustic soda is a raw feedstock used in bauxite refining for it to be converted into alumina. Ma'aden plans to produce caustic soda through a 50/50 venture with Sahara Petrochemicals with a plant capacity to produce 0.25m tonnes per year of caustic soda and 0.3m tonnes per year of ethylene dichloride (EDC). Production is due to come online in 2011. The plant will be located in Al Jubeil and receive ethylene through a pipeline from a nearby ethane cracker owned by Tasnee.

### Kaolin and low-grade bauxite

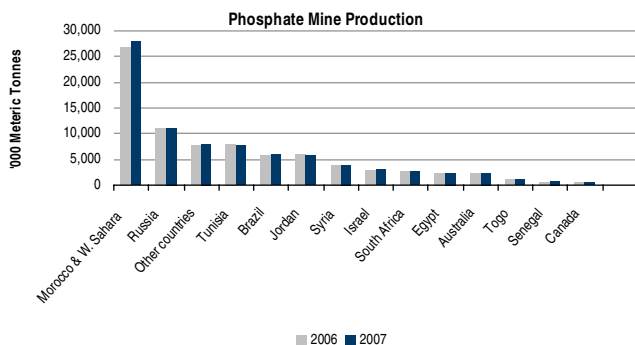
In addition, Ma'aden says it expects to start commercial production of low-grade bauxite and kaolin by the end of this year. These materials will be sold as raw materials to cement factories in Saudi Arabia. The project should produce circa 50,000 tons of kaolin per year and 250,000 tons of bauxite. Capital costs to build the facilities are estimated by the company at SR13.5m (US\$3.6m).

# Phosphates/DAP overview

Currently, there are many producers in the phosphate fertiliser market competing mainly based on price. Market players range from international and government-controlled companies. The main phosphate production facilities are found in the US, Morocco, China, Russia, Brazil, Jordan and Tunisia.

Given the recent sharp price increases in a tightening phosphate rock market, competitive power has shifted towards vertically integrated fertiliser producers with access to the underground resource. Although Ma'aden's massive integrated facility doesn't compete efficiently up the value chain process due to the large cost of producing and transporting the raw feedstock to the fertiliser complex, it still has the ability to benefit given its large-scale operation and low phosphoric acid costs.

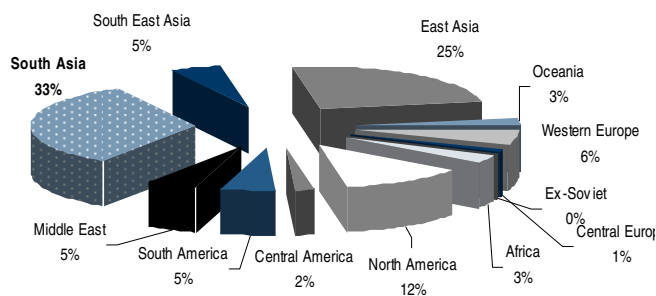
**Figure 39: Phosphate mine production**



Source: USGS

The main phosphate consumers are countries with large populations and agricultural production, such as China, the US, Brazil and India.

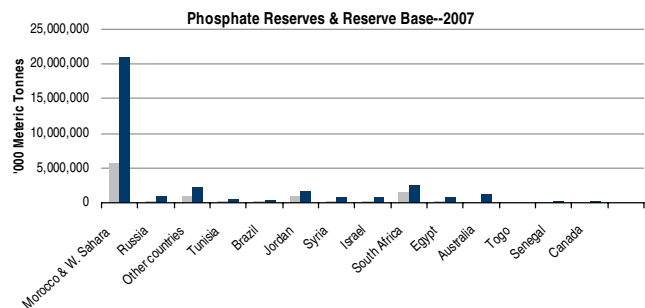
**Figure 41: Global DAP consumption: Asia absorbs over 60%**



Source: Company data, CRU

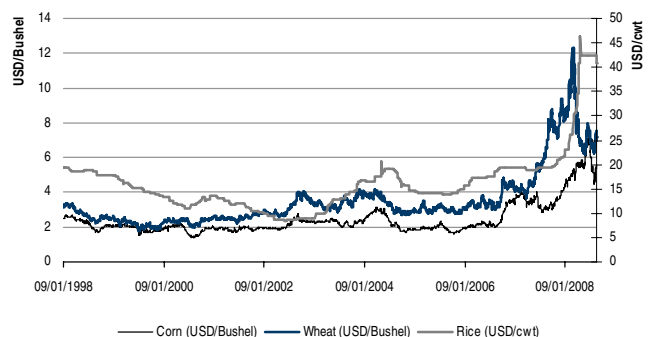
The recent sharp rise in DAP prices was caused by factors such as: 1) a lag in production of key chemicals: prices of key ingredients for fertilisers like sulphur and phosphate rock have risen substantially this year as production lagged demand; 2) increasing demand for fertilisers—with food prices on the rise (Figure 42), efforts are intensifying to increase farm yields to boost food, in addition to demand stemming from biofuel production; and 3) China—given inflation, earthquakes, and a view of phosphate as a strategic national resource—imposed a 135% tariff on fertilisers to curb exports.

**Figure 40: Phosphate reserves and reserve base, 2007**

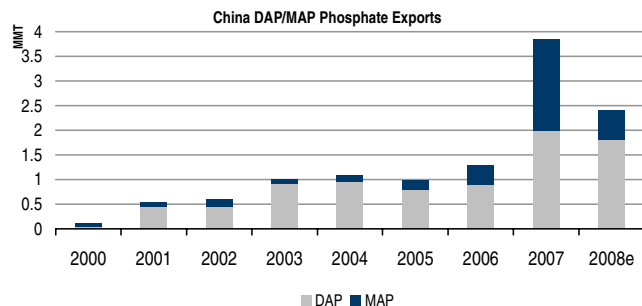


Source: USGS

**Figure 42: Higher crop prices driving more agricultural activity and a push for self-sufficiency in Asia**



Source: the BLOOMBERG PROFESSIONAL™ service

**Figure 43: China exporting less**

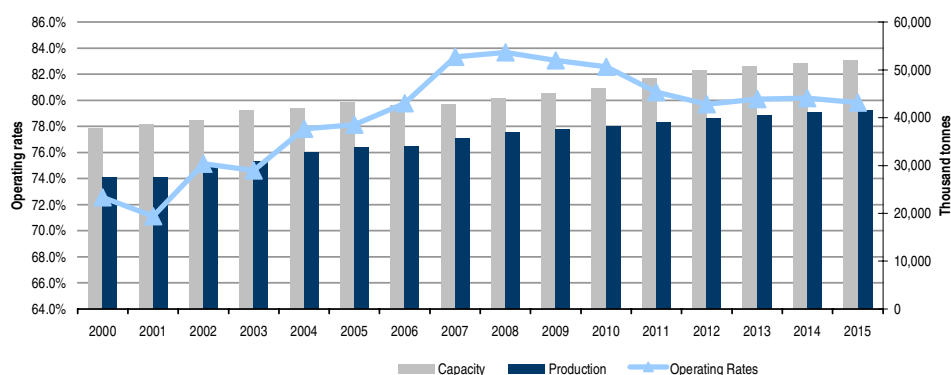
Source: Mosaic Q2 earnings presentation

As with other basic material companies, fertiliser stocks showed historical patterns as the underlying commodities swung between balances and imbalances. However, as these two forces emerge better aligned, we believe the next decade will see dampened cyclical volatility translating into less earnings volatility.

## Moving through the next decade

We think the phosphate market balance will be tested in the 2011–15 period, when the Ma'aden project brings a 3–4% increase in global MAP/DAP capacity. However, producers are already very focused on this risk, and we expect to see few other significant expansions beyond what is already announced for that period. We expect some further capacity rationalisation in roughly that timeframe to provide a partial offset. Evidence of US producer caution is a key assumption in our expectation of a relatively shallow slump in margins when Ma'aden starts production. While there is clearly a risk that emerging market players will overbuild, we think that this risk is principally in the years after 2015.

In the following figure, we set out our forecasts of increasing capacities on a global scale. Our global agricultural sciences team expects 2008–09 to witness the peak in capacity utilisation (reaching nearly 84%) before new capacities start up. Hypothesising a gradual ramp-up in Ma'aden's capacity, we anticipate operating rates to decrease to 80% before increasing demand gradually absorbs the supply boost. We believe Ma'aden could further over-take American producers who have already lost ground in China and other countries in the region as China turned into a net exporter. Add to this Ma'aden's proximity to India/Pakistan, and this could trigger more marginal producers to either cut capacities or switch focus to other demand areas, such as South America.

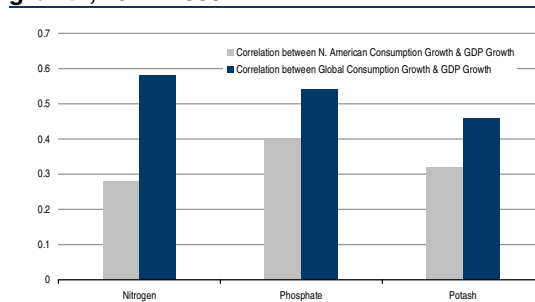
**Figure 44: Phosphate capacity and production**

Source: Credit Suisse estimates

## Just a cycle—or a different game?

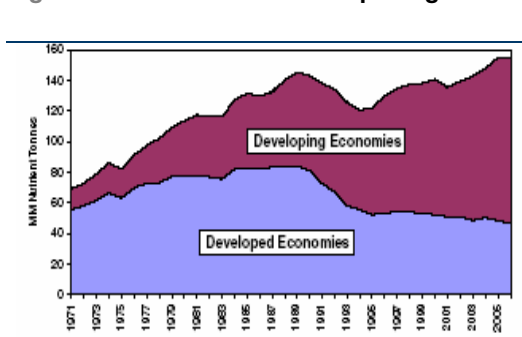
China and India's demand for crop nutrients isn't driven directly by GDP, but by demographic changes brought about as a consequence of higher GDP levels in the developing world. We view these factors as less volatile than GDP growth itself. Thus, we believe the next two decades could show falling correlations between Asian fertiliser consumption and GDP, becoming closer to levels in North America as Asia's rising incomes and urbanisation increase meat demand and diet variety.

**Figure 45: Fertiliser consumption and GDP growth, 1971–2005**



Source: FAO, Credit Suisse estimates

**Figure 46: Global NPK consumption growth**



Source: FAO, Credit Suisse estimates

## Asia, a closer look at agriculture

Regional consumption of fertilisers in Asia is increasing 5–6% vis-à-vis 3–4% globally on a high base as it already accounts for half of the world's fertiliser consumption. At the same time, it is mainly fertiliser-import dependent and so the brunt of the price burden is bared by government subsidies, insulating domestic consumer from significant price rises.

Since Ma'aden declared that its DAP production is targeting mainly South/South East Asia, we provide a brief agricultural overview of India, Pakistan and Taiwan, as we believe these will be key export destinations for Ma'aden's products.

### India

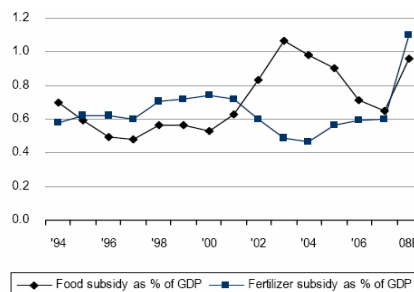
In India, food and fertiliser subsidies together currently account for more than 2.5% of GDP (see Figure 48). As India is starting to loosen its grip on food self-sufficiency, domestic food procurement prices are becoming more responsive to global prices. Rice and meat are the most important staples in India, accounting for 40% of diet by weight, mainly due to the vast vegetarian segment of the population.

**Figure 47: India: Agricultural overview, 2006**

|                                  |                                         |                                           |       |
|----------------------------------|-----------------------------------------|-------------------------------------------|-------|
| GDP (US\$ bn)                    | 900                                     | GDP per capita (US\$)                     | 780   |
| Agriculture as % of GDP          | 19                                      | Agriculture growth – last 6 yrs' CAGR (%) | 2.4   |
| Land under cultivation (%)       | 52                                      | Agri contribution to employment (%)       | 51    |
| Weight of food in CPI basket (%) | 46.2                                    | Calories per capita                       | 2,470 |
| Key crops                        | Rice, wheat, millets, cotton, sugarcane |                                           |       |

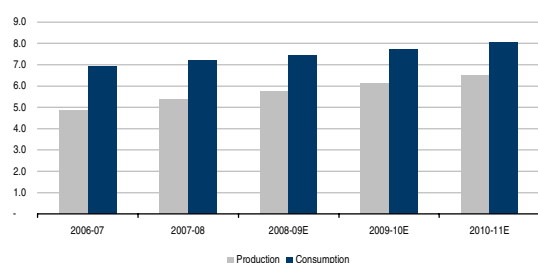
Source: FAO, US Statistics Division, the BLOOMBERG PROFESSIONAL™ service

**Figure 48: Food and fertiliser subsidies on the rise**

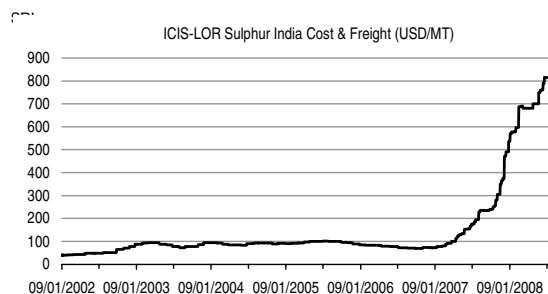


Source: Economic Survey 2006, 2007

India is expected (see Figure 49) to have a 1.5m tonnes of DAP deficit by 2011, a gap to be filled by imports, making the country a strong candidate to absorb a major chunk of Ma'aden's expected supply.

**Figure 49: India's forecast DAP consumption**\* Data for Indian fiscal years are from April 1<sup>st</sup> to March 31<sup>st</sup>

Source: CRISIL

**Figure 50: Sulphur increasing costs of Indian producers**

Source: the BLOOMBERG PROFESSIONAL™ service

## Pakistan

Agriculture remains a crucial part of the economy (20% of GDP), with wheat being the most important in terms of crop and cultivation, while rice is the main earner on the export register; even so, the country is still a net agri-importer. The recent spike in DAP prices placed demand under stress despite government subsidies. One company, Fauji Fertiliser Bin Qasim (FFBL), supplies 40% of local demand. In the short term, we expect the demand slump to affect imports before it recovers as price pressures ease. However, FFBL is a non-integrated producer largely relying on imported phosphoric acid (it holds a 25% stake in a Moroccan phosphoric acid producer).

**Figure 51: Pakistan—Agricultural overview**

|                              |                                                      |                                          |       |
|------------------------------|------------------------------------------------------|------------------------------------------|-------|
| GDP (US\$ bn)                | 147                                                  | GDP per capita (US\$)                    | 880   |
| Agriculture as % of GDP      | 22                                                   | Agriculture growth – last 5 yrs CAGR (%) | 3.9   |
| Land under cultivation (%)   | 28                                                   | Agri contribution to employment (%)      | 48    |
| Wt of food in CPI basket (%) | 40.3                                                 | Calories per capita                      | 2,320 |
| Key crops                    | Wheat, cotton, rice, sugarcane, tobacco, maize, gram |                                          |       |

Source: Fao, the BLOOMBERG PROFESSIONAL™ service, Credit Suisse estimates

## Taiwan

Agricultural output as a percentage of GDP has been on a decline due to slow population growth, dietary changes and a lack of exports; conversely, the recent hike in food prices globally has prompted the Taiwanese governments to change its agricultural strategy. The Agricultural and Food Agency is reported to be boosting the utilisation of idle land (25% of arable land in Taiwan). We believe this change is likely to increase fertiliser sales. The government is trying to compensate for an expected slump in rice imports from Thailand and Vietnam due to tight regional demand.

**Figure 52: Taiwan: Agriculture overview**

|                              |                           |                                          |        |
|------------------------------|---------------------------|------------------------------------------|--------|
| GDP (US\$ bn)                | 375                       | GDP per capita (US\$)                    | 17,976 |
| Agriculture as % of GDP      | 1                         | Agriculture growth – last 5 yrs CAGR (%) | 3.3    |
| Land under cultivation (%)   | 18                        | Agri contribution to employment (%)      | 5      |
| Wt of food in CPI basket (%) | 26.0                      | Calories per capita                      | 2,350  |
| Key crops                    | Rice, fruits & vegetables |                                          |        |

Source: Directorate General of Budget, Accounting and Statistics (DGBAS), Credit Suisse estimates

## South Korea

With food inflation likely to prevail for a long time, the agricultural sector has recently drawn attention from both policymakers and investors. Policymakers are trying to tame this inflation using conventional methods (tariff reductions and administrative controls) and by revisiting their current policy with a focus on self sufficiency. Despite falling rice production and decreasing grain consumption (due to rising incomes and a shift toward meat consumption), Korea has remained a marginal rice importer. However, this change is creating more cornfeed demand.

For a full analysis of Asia's agricultural sector, including agriculture-related investment opportunities, please refer to our Credit Suisse report, *Asian food and rural income*, dated 2 June 2008

**Figure 53: Korea: Agriculture overview, 2006 (except calories per capita 2003–04)**

|                                     |                        |                                                 |        |
|-------------------------------------|------------------------|-------------------------------------------------|--------|
| <b>GDP (US\$ bn)</b>                | 870                    | <b>GDP per capita (US\$)</b>                    | 18,200 |
| <b>Agriculture as a % of GDP</b>    | 2.0                    | <b>Agriculture growth – last 6 yrs CAGR (%)</b> | -0.2   |
| <b>Land under cultivation (%)</b>   | 18.1                   | <b>Agri. contribution to employment (%)</b>     | 7.1    |
| <b>Wt of food in CPI basket (%)</b> | 13.3                   | <b>Calories per capita</b>                      | 3,030  |
| <b>Key crops</b>                    | Rice, soybeans, barley |                                                 |        |

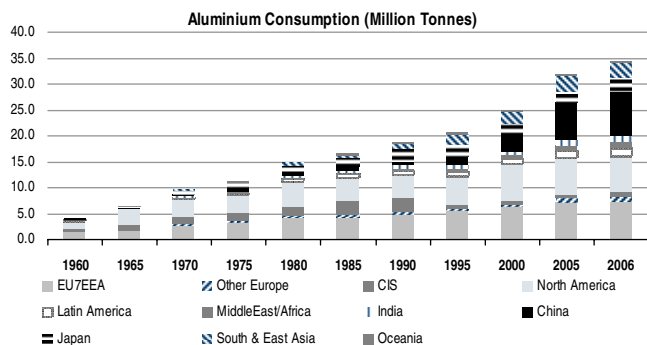
Source: FAO, UN Statistics Division, the BLOOMBERG PROFESSIONAL™ service, Credit Suisse estimates

# Aluminium overview

Global consumption of primary aluminium in 2006 was estimated by CRU at 34.34m tonnes made from alumina in addition to another 14m tonnes resulting from recycling scrap. Between 2000 and 2006, China contributed 59% to total global growth in primary aluminium consumption (see Figure 54). In 2006, transport accounted for 30% of aluminium consumption, followed by construction, which accounted for 19%.

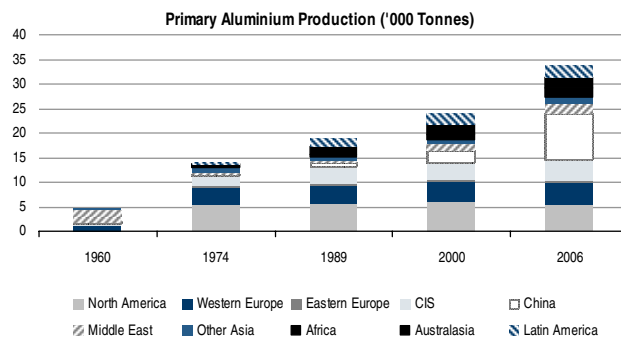
The main cost inputs for producing alumina are energy, labour and carbon products (coke and pitch). Alumina is generally processed near a source of cheap power, a factor that we expect Ma'aden to successfully address through the 2,100MWh oil-fired plant that is the company has said it expects to source power at an estimated cost of US\$24/MWh (for comparison to US costs of electricity see Figure 59).

**Figure 54: Aluminium consumption (m tonnes)**



Source: Company data, CRU

**Figure 55: Primary aluminium production ('000 tonnes)**

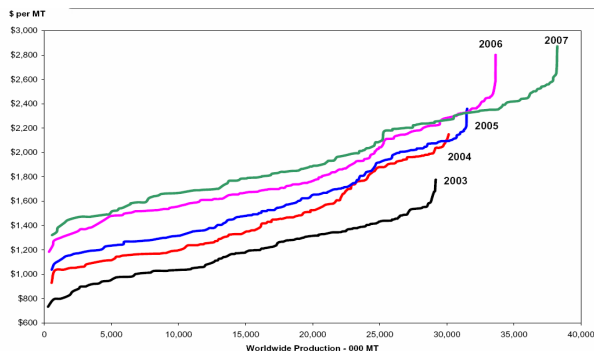


Source: Company data, CRU

## Structural change an opportunity for Ma'aden

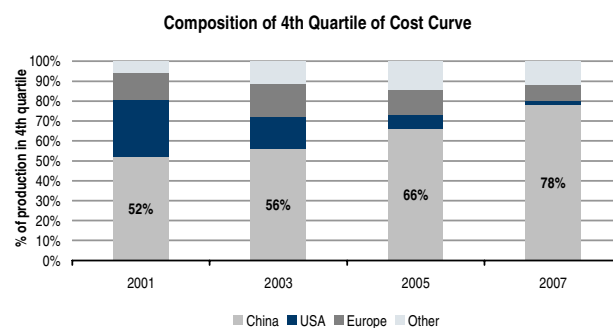
The rise of fossil fuels costs over the last four years, less efficient Chinese producers coming online to satisfy local demand (as they are able to match imported prices of aluminium due to the lesser need to pay for transport costs), and rising caustic soda prices, all combine to put upward pressure on production costs.

**Figure 56: Spiralling production costs**

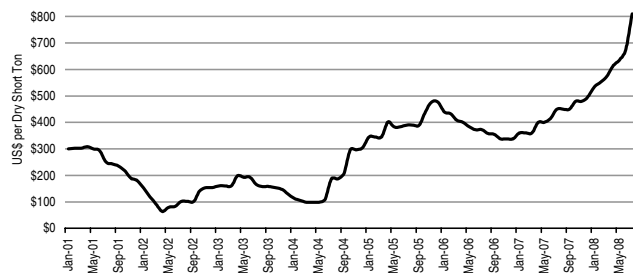


Source: Alcoa

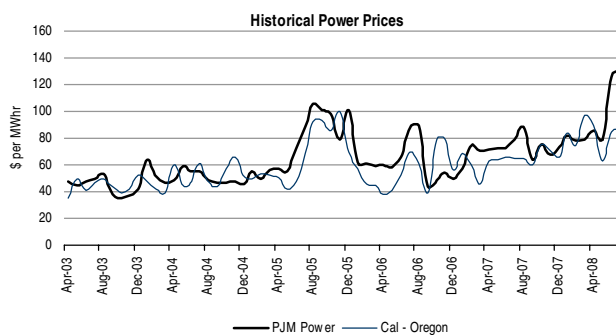
**Figure 57: Composition of 4<sup>th</sup> quartile of cost curve**



Source: Century Aluminium

**Figure 58: Caustic soda prices**

Source: Kasteel Chemicals

**Figure 59: Fossil fuels driving cost of electricity**

Source: the BLOOMBERG PROFESSIONAL™ service

Several global capacity additions have been halted as bringing more smelters online has become increasingly dependent on securing energy sources.

**Figure 60: Smelter delays – energy source-related**

| Capacity (kmt) | Location                 | Reason for Delay                            |
|----------------|--------------------------|---------------------------------------------|
| 750            | Sarawak in Malaysia      | Power shortage in country                   |
| 720            | Coega in South Africa    | Insufficient power supply                   |
| 700            | Ruwais in Abu Dhabi      | Emirate diverting Natural gas to other uses |
| 150            | Datun Aluminium in China | Insufficient power supply                   |

Source: the BLOOMBERG PROFESSIONAL™ service, Alcoa

Historically, aluminium has been the least supply-constrained base metal. Global production has increased 6.2% each year since 2000. In our view, the factors mentioned above (energy and input costs) together form a plausible thesis for derailing that growth rate. Earlier this year, we witnessed a period of electric power sources constraints in South Africa and China. Add to that Chinese efforts to reign in excess aluminium production via elimination of rebates and implementation of tariffs. Combine these factors with a rise in upfront building costs; the cost of building a new integrated smelter has recently reached US\$5,000/tonne of annual capacity versus US\$3,000/tonne historically.

To put the above in context: combining the fact that 15% of the world's aluminium supply is produced at a cost of US\$2024/tonne or higher (see Figure 56), implying what would be an expected price floor, with expectations for a rise in costs for major inputs, we can reasonably predict a higher price floor. Given this, we expect Ma'aden to benefit from such an 'industry rerationalisation' due to 1) being on the lower quartile of the production curve; 2) an integrated ore to metal operation supports access to bauxite/alumina; and 3) its proximity to consuming regions. We believe these factors could eventually be reflected in its aluminium price realisation compared to price benchmarks.

## Supply/demand

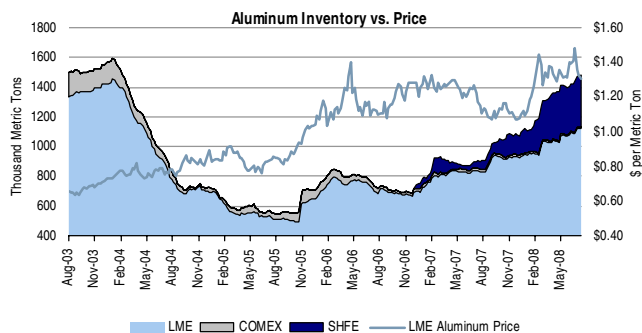
Short term, we expect a moderation in aluminium consumption growth rates. The US (accounting for 16% of global demand in 2007) slowdown, in particular housing starts, has affected demand for aluminium. This could be further exacerbated by a slowing auto industry as Americans shift away from gas guzzlers. China, which accounted for 39% of global consumption in 2007, is still expected to increase its aluminium consumption by 20% in 2008. Likewise, we expect demand from other emerging economies in Eastern Europe, Latin America and non-China Asia to grow aluminium consumption by 6.7% and 4.9% in 2008 and 2009, respectively, compared to 6.4% in 2007. In total, these economies accounted for 20% of global aluminium consumption in 2007. We believe the rise in consumption in emerging economies will further soften the blow from potentially flat US demand.

**Figure 61: Global aluminium supply/demand and balance**

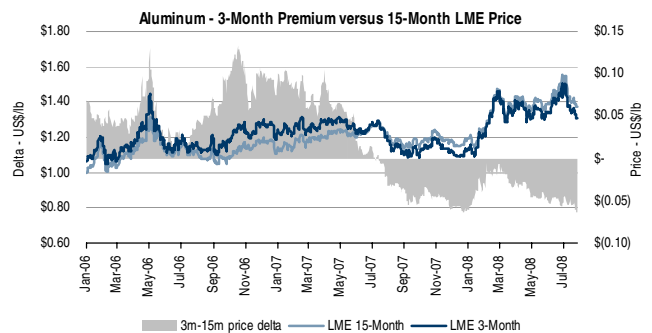
|                                                      | 2006   | 2007E  | 2008E  | 2009E  | 2010E  |
|------------------------------------------------------|--------|--------|--------|--------|--------|
| Production ('000 tonnes)                             | 33,976 | 38,167 | 41,426 | 44,618 | 46,748 |
| Highly Probable Projects                             | 0      | 0      | 0      | 89     | 998    |
| Production ('000 tonnes)                             | 33,976 | 38,167 | 41,426 | 44,707 | 47,745 |
| % change                                             | 6.3%   | 12.3%  | 8.5%   | 7.9%   | 6.8%   |
| Consumption ('000 tonnes)                            | 34,382 | 38,054 | 41,361 | 44,257 | 47,437 |
| % change                                             | 7.2%   | 10.7%  | 8.7%   | 7.0%   | 7.2%   |
| Implied Surplus/Deficit ('000 tonnes)                | -406   | 113    | 65     | 450    | 308    |
| Surplus (Deficit) as a Percentage of Consumption     |        | 0.3%   | 0.2%   | 1.0%   | 0.6%   |
| Estimated Total Inventories (In Days of Consumption) | 47     | 41     | 39     | 40     | 40     |

Source: Brook Hunt, Credit Suisse estimates

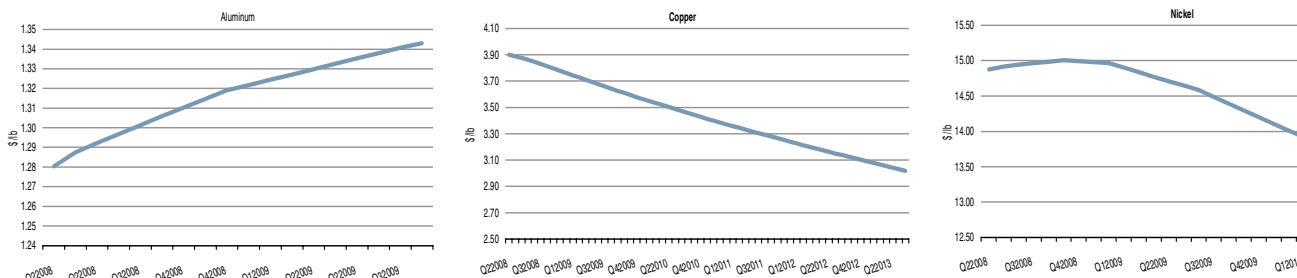
Since July 2007, aluminium futures have moved into a healthy contango (see Figure 63), reflecting the increasing cost pressures that producers are facing to keep supplies operating above break-even prices. (see Figure 61).

**Figure 62: Exchange Inventories reaching 4-year high is a short-term concern**

Source: the BLOOMBERG PROFESSIONAL™ service

**Figure 63: Futures prices reflecting cost pressures**

Source: the BLOOMBERG PROFESSIONAL™ service

**Figure 64: Aluminium futures curves at better positions compared to other metals**

Source: the BLOOMBERG PROFESSIONAL™ service

**Figure 65: Ma'aden – summary financials (in SAR millions, except for per share data)**

|                                           | 2005         | 2006         | 2007           | 2008e          | 2009e          | 2010e          | 2011e          | 2012e          | 2013e          | 2014e          |
|-------------------------------------------|--------------|--------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|----------------|
| <b>CONSOLIDATED INCOME STATEMENT</b>      |              |              |                |                |                |                |                |                |                |                |
| Sales                                     |              |              |                |                |                |                |                |                |                |                |
| Gold Division                             | -            | -            | -              | 635            | 710            | 725            | 624            | 541            | 317            | 230            |
| Aluminium Division                        | -            | -            | -              | -              | -              | -              | -              | 2,637          | 3,545          | 3,545          |
| PhosCo                                    | -            | -            | -              | -              | -              | -              | 3,149          | 4,528          | 5,317          | 5,317          |
| <b>Consolidated Sales</b>                 | <b>278</b>   | <b>350</b>   | <b>244</b>     | <b>635</b>     | <b>710</b>     | <b>725</b>     | <b>3,773</b>   | <b>7,707</b>   | <b>9,458</b>   | <b>9,372</b>   |
| Total Production Cash Costs               | 114          | 142          | 134            | 123            | 125            | 126            | 786            | 1,705          | 1,934          | 1,876          |
| DDA                                       | 37           | 46           | 33             | 132            | 132            | 132            | 1,529          | 1,797          | 1,891          | 1,892          |
| Gross Profit                              | 127.20       | 162.01       | 76.72          | 380            | 454            | 466            | 1,458          | 4,204          | 5,633          | 5,604          |
| G&A                                       | 47.2         | 58.4         | 96.3           | 100            | 108            | 120            | 128            | 140            | 140            | 140            |
| Other Expenses                            | 48.9         | 59.3         | 34.7           | -              | -              | -              | -              | -              | -              | -              |
| Other Income                              | 3.26         | 0.04         | 27.69          | -              | -              | -              | -              | -              | -              | -              |
| <b>Operating EBIT</b>                     | <b>34</b>    | <b>44</b>    | <b>(27)</b>    | <b>280</b>     | <b>346</b>     | <b>346</b>     | <b>1,330</b>   | <b>4,064</b>   | <b>5,493</b>   | <b>5,464</b>   |
| Income from Investments                   | 181.26       | 273.59       | 225.64         | 196            | 74             | 60             | 60             | 60             | 60             | 60             |
| Extraordinary Items                       | -            | -            | (446)          | -              | -              | -              | -              | -              | -              | -              |
| Interest Expense                          | -            | -            | -              | -              | 126            | 638            | 1,018          | 1,105          | 906            | 513            |
| <b>EBT</b>                                | <b>216</b>   | <b>318</b>   | <b>(247)</b>   | <b>476</b>     | <b>293</b>     | <b>(232)</b>   | <b>373</b>     | <b>3,019</b>   | <b>4,647</b>   | <b>5,011</b>   |
| Taxes                                     | 0            | 0            | -              | 12             | 7              | 6              | 9              | 75             | 116            | 125            |
| <b>Net Income</b>                         | <b>216</b>   | <b>318</b>   | <b>(247)</b>   | <b>464</b>     | <b>286</b>     | <b>(226)</b>   | <b>363</b>     | <b>2,944</b>   | <b>4,530</b>   | <b>4,886</b>   |
| <b>EPS (unadjusted)</b>                   | <b>0.23</b>  | <b>0.34</b>  | <b>(0.27)</b>  | <b>0.50</b>    | <b>0.31</b>    | <b>(0.24)</b>  | <b>0.39</b>    | <b>3.18</b>    | <b>4.90</b>    | <b>5.28</b>    |
| <b>ADJUSTED INCOME/EBITDA</b>             |              |              |                |                |                |                |                |                |                |                |
| Net Income                                | 216          | 318          | (247)          | 464            | 286            | 226            | 363            | 2,944          | 4,530          | 4,886          |
| Other income                              | 181.26       | 273.59       | 225.64         | 196            | 74             | 60             | 60             | 60             | 60             | 60             |
| Other adjustments                         | -            | -            | (446)          | -              | -              | -              | -              | -              | -              | -              |
| <b>Adjusted Income</b>                    | <b>34</b>    | <b>44</b>    | <b>(27)</b>    | <b>268</b>     | <b>212</b>     | <b>(286)</b>   | <b>303</b>     | <b>2,884</b>   | <b>4,470</b>   | <b>4,826</b>   |
| <b>Adjusted EPS</b>                       | <b>0.04</b>  | <b>0.05</b>  | <b>(0.03)</b>  | <b>0.29</b>    | <b>0.23</b>    | <b>(0.31)</b>  | <b>0.33</b>    | <b>3.12</b>    | <b>4.83</b>    | <b>5.22</b>    |
| Adjusted Income                           | 34           | 44           | (27)           | 464            | 286            | (226)          | 363            | 2,944          | 4,530          | 4,886          |
| Tax                                       | -            | -            | -              | 12             | 7              | (6)            | 9              | 75             | 116            | 125            |
| Interest                                  | -            | -            | -              | -              | 126            | 638            | 1,018          | 1,105          | 906            | 513            |
| DDA                                       | 37           | 46           | 33             | 132            | 132            | 132            | 1,529          | 1,797          | 1,891          | 1,892          |
| <b>EBITDA</b>                             | <b>71</b>    | <b>90</b>    | <b>7</b>       | <b>608</b>     | <b>551</b>     | <b>538</b>     | <b>2,919</b>   | <b>5,922</b>   | <b>7,444</b>   | <b>7,416</b>   |
| <b>CASH FLOW STATEMENT</b>                |              |              |                |                |                |                |                |                |                |                |
| Adjusted Income                           | 34           | 44           | (27)           | 464            | 286            | (226)          | 363            | 2,944          | 4,530          | 4,886          |
| DDA                                       | 37           | 46           | 33             | 132            | 132            | 132            | 1,529          | 1,797          | 1,891          | 1,892          |
| Other adjustments                         | 15.1         | 16.5         | (427)          | -              | -              | -              | -              | -              | -              | -              |
| <b>Operating Cash Flow Before WC adj</b>  | <b>86</b>    | <b>106</b>   | <b>(421)</b>   | <b>596</b>     | <b>418</b>     | <b>(94)</b>    | <b>1,893</b>   | <b>4,741</b>   | <b>6,422</b>   | <b>6,778</b>   |
| <b>Cash Flow From Operations</b>          | <b>152</b>   | <b>159</b>   | <b>(647)</b>   | <b>596</b>     | <b>418</b>     | <b>(94)</b>    | <b>1,893</b>   | <b>4,741</b>   | <b>6,422</b>   | <b>6,778</b>   |
| Capex                                     | (290)        | (395)        | (1,700)        | (8,541)        | (9,840)        | (8,187)        | (4,507)        | (3,733)        | (11)           | (8)            |
| Acquisitions                              | -            | -            | -              | -              | -              | -              | -              | -              | -              | -              |
| Asset Sales                               | -            | -            | -              | -              | -              | -              | -              | -              | -              | -              |
| Other Investing                           | 566          | 300          | 295            | -              | -              | -              | -              | -              | -              | -              |
| <b>Investing Cash Flow</b>                | <b>276</b>   | <b>(94)</b>  | <b>(1,405)</b> | <b>(8,541)</b> | <b>(9,840)</b> | <b>(8,187)</b> | <b>(4,507)</b> | <b>(3,733)</b> | <b>(11)</b>    | <b>(8)</b>     |
| Common Stock Issue                        | -            | -            | -              | 9,100          | -              | -              | -              | -              | -              | -              |
| Debt Financing                            | -            | -            | -              | -              | 7,572          | 8,282          | 2,614          | 276            | -              | -              |
| Debt Repayment                            | -            | -            | -              | -              | -              | -              | -              | (1,285)        | (6,411)        | (6,770)        |
| Other Financing                           | -            | -            | -              | -              | -              | -              | -              | -              | -              | -              |
| <b>Financing Cash Flow</b>                | <b>-</b>     | <b>-</b>     | <b>-</b>       | <b>9,100</b>   | <b>7,572</b>   | <b>8,282</b>   | <b>2,614</b>   | <b>(1,008)</b> | <b>(6,411)</b> | <b>(6,770)</b> |
| <b>Total Change in Cash</b>               | <b>428</b>   | <b>65</b>    | <b>(2,052)</b> | <b>1,156</b>   | <b>(1,851)</b> | <b>-</b>       | <b>-</b>       | <b>0</b>       | <b>-</b>       | <b>-</b>       |
| Cash Beginning of the period              | -            | -            | 4,747          | 2,695          | 3,851          | 2,000          | 2,000          | 2,000          | 2,000          | 2,000          |
| Cash--End of period                       | -            | -            | 2,695          | 3,851          | 2,000          | 2,000          | 2,000          | 2,000          | 2,000          | 2,000          |
| <b>BALANCE SHEET</b>                      |              |              |                |                |                |                |                |                |                |                |
| <b>Current Assets</b>                     |              |              |                |                |                |                |                |                |                |                |
| Cash And Equivalents                      | 4,682        | 4,747        | 2,695          | 3,851          | 2,000          | 2,000          | 2,000          | 2,000          | 2,000          | 2,000          |
| AR                                        | 12           | 11           | 208            | 208            | 208            | 208            | 208            | 208            | 208            | 208            |
| Other Current Assets                      | 224          | 268          | 286            | 286            | 286            | 286            | 286            | 286            | 286            | 286            |
| <b>Total Current Assets</b>               | <b>4,916</b> | <b>4,990</b> | <b>3,156</b>   | <b>4,311</b>   | <b>2,461</b>   | <b>2,461</b>   | <b>2,461</b>   | <b>2,461</b>   | <b>2,461</b>   | <b>2,461</b>   |
| <b>Non-Current Assets</b>                 |              |              |                |                |                |                |                |                |                |                |
| Long Term Investments                     | 65           | 63           | -              | -              | -              | -              | -              | -              | -              | -              |
| Long-Term Receivables                     | 47           | -            | 61             | 61             | 61             | 61             | 61             | 61             | 61             | 61             |
| PPPE--Net                                 | 227          | 310          | 341            | 8,750          | 18,458         | 28,329         | 31,307         | 33,243         | 31,362         | 29,478         |
| Companies Under Establishment             | -            | -            | 1,816          | 1,816          | 1,816          | -              | -              | -              | -              | -              |
| Preoperating Expenses                     | 405          | 674          | 474            | 474            | 474            | 474            | 474            | 474            | 474            | 474            |
| <b>Total Assets</b>                       | <b>5,659</b> | <b>6,038</b> | <b>5,848</b>   | <b>15,413</b>  | <b>23,270</b>  | <b>31,326</b>  | <b>34,304</b>  | <b>36,239</b>  | <b>34,358</b>  | <b>32,475</b>  |
| <b>Current Liabilities</b>                |              |              |                |                |                |                |                |                |                |                |
| Accounts Payables and Accruals            | 51           | 83           | 147            | 147            | 147            | 147            | 147            | 147            | 147            | 147            |
| Accrued Expenses                          | 98           | 110          | 106            | 106            | 106            | 106            | 106            | 106            | 106            | 106            |
| <b>Total Current Liabilities</b>          | <b>149</b>   | <b>193</b>   | <b>253</b>     | <b>253</b>     | <b>253</b>     | <b>253</b>     | <b>253</b>     | <b>253</b>     | <b>253</b>     | <b>253</b>     |
| Debt                                      | -            | -            | -              | -              | 7,572          | 15,854         | 18,469         | 17,460         | 11,049         | 4,279          |
| End of Service                            | 40           | 45           | 57             | 57             | 57             | 57             | 57             | 57             | 57             | 57             |
| Asset Retirement Obligation               | 44           | 55           | 55             | 55             | 55             | 55             | 55             | 55             | 55             | 55             |
| Deferred Revenues                         | 14           | 14           | -              | -              | -              | -              | -              | -              | -              | -              |
| <b>Total Non Current Liabilities</b>      | <b>97</b>    | <b>114</b>   | <b>112</b>     | <b>112</b>     | <b>7,684</b>   | <b>15,966</b>  | <b>18,580</b>  | <b>17,572</b>  | <b>11,161</b>  | <b>4,391</b>   |
| <b>Total Liabilities</b>                  | <b>246</b>   | <b>306</b>   | <b>364</b>     | <b>364</b>     | <b>7,936</b>   | <b>16,218</b>  | <b>18,833</b>  | <b>17,824</b>  | <b>11,413</b>  | <b>4,644</b>   |
| Common Equity                             | 4,151        | 4,183        | 4,183          | 13,283         | 13,283         | 13,283         | 13,283         | 13,283         | 13,283         | 13,283         |
| Retained Earnings                         | 1,262        | 1,548        | 1,301          | 1,765          | 2,051          | 1,824          | 2,188          | 5,131          | 9,662          | 14,548         |
| <b>Total OE</b>                           | <b>5,413</b> | <b>5,731</b> | <b>5,484</b>   | <b>15,048</b>  | <b>15,334</b>  | <b>15,108</b>  | <b>15,471</b>  | <b>18,415</b>  | <b>22,945</b>  | <b>27,831</b>  |
| <b>Total Liability and Owner's Equity</b> | <b>5,659</b> | <b>6,038</b> | <b>5,848</b>   | <b>15,413</b>  | <b>23,270</b>  | <b>31,326</b>  | <b>34,304</b>  | <b>36,239</b>  | <b>34,358</b>  | <b>32,475</b>  |

Source: Company data, Credit Suisse estimates

**Companies Mentioned** (Price as of 02 Sep 08)

Agnico-Eagle Mines Limited (AEM.TO, \$52.92, NEUTRAL [V], TP \$65.00)  
 Alamos Gold Inc. (AGI.TO, \$5.21, NEUTRAL [V], TP \$7.50)  
 Barrick Gold Corp. (ABX, \$32.91, OUTPERFORM, TP \$56.00)  
 CF Industries (CF, \$138.02, OUTPERFORM [V], TP \$180.00)  
 Fauji Fertilizer Bin Qasim Limited (JORD.KA, PRs22.78, NEUTRAL, TP PRs26.00)  
 Gammon Gold Inc. (GAM.TO, \$9.04, NEUTRAL [V], TP \$10.50)  
 \*Gold Fields Limited (GFIJ.J, R65.92, NEUTRAL, TP R102.00)  
 Goldcorp Inc. (G.TO, \$31.30, OUTPERFORM [V], TP \$50.00)  
 Golden Star (GSC.TO, \$1.42, NEUTRAL [V], TP \$3.60)  
 \*Harmony Gold (HARJ.J, R62.50, OUTPERFORM, TP R107.00)  
 Israel Chemicals (ICL.TA, NIS56.00, OUTPERFORM, TP NIS109.00)  
 Kinross Gold Corp. (K.TO, \$14.99, NEUTRAL [V], TP \$23.00)  
 Lihir Gold Limited (LGL.AX, \$1.91, OUTPERFORM, TP \$5.25, OVERWEIGHT)  
 Mosaic Co (MOS, \$97.21, OUTPERFORM [V], TP \$195.00)  
 Newcrest Mining Limited (NCM.AX, A\$24.84, OUTPERFORM [V], TP A\$45.00, OVERWEIGHT)  
 Newmont Mining (NEM, \$42.93, OUTPERFORM, TP \$65.00)  
 Northgate Minerals (NGX.TO, \$1.37, OUTPERFORM [V], TP \$4.00)  
 Potash Corporation of Saskatchewan (POT, \$162.26, NEUTRAL, TP \$280.00)  
 Rio Tinto Limited (RIO.AX, A\$124.96, RESTRICTED)  
 Saudi Arabian Mining Co. (1211.SE, SRIsr24.75, OUTPERFORM, TP SRIsr36.57)  
 Saudi Basic Industries Corp (2010.SE, SRIsr126.50, NEUTRAL, TP SRIsr174.76)  
 Sino Gold Mining Ltd (SGX.AX, A\$4.17, OUTPERFORM [V], TP A\$6.50, OVERWEIGHT)  
 Yamana Gold (YRI.TO, \$9.98, OUTPERFORM [V], TP \$18.50)  
 Zijin Mining Group Co., Ltd (2899.HK, HK\$4.85, OUTPERFORM [V], TP HK\$8.00)

\*Denotes a Credit Suisse Standard Securities covered company, a joint venture involving Credit Suisse. For information regarding companies covered by CSSS, full research reports, definitions of analysts' stock ratings, and disclosure information, please refer to: [www.researchandanalytics.com](http://www.researchandanalytics.com).

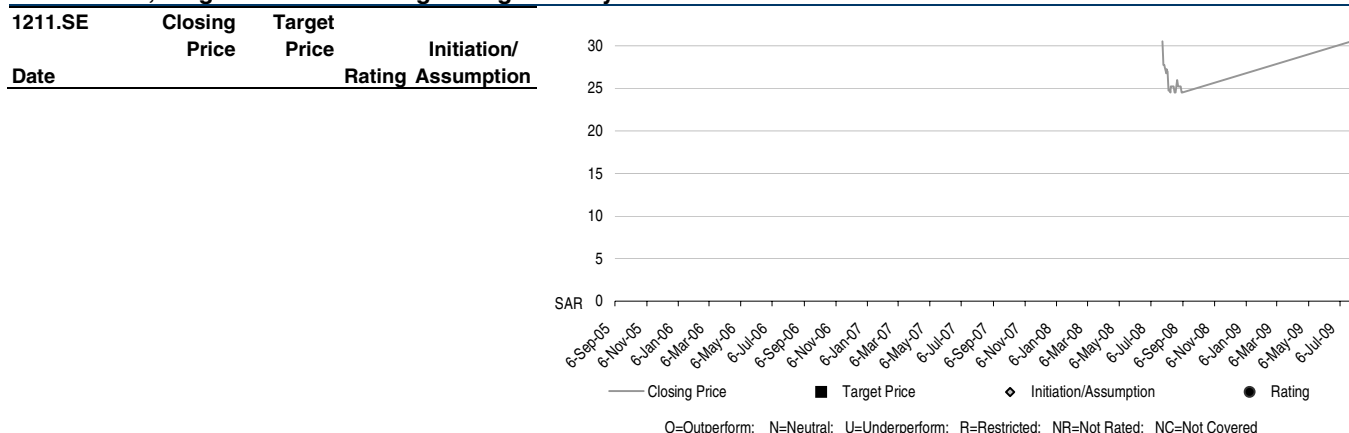
## Disclosure Appendix

### Important Global Disclosures

The analysts identified in this report each certify, with respect to the companies or securities that the individual analyzes, that (1) the views expressed in this report accurately reflect his or her personal views about all of the subject companies and securities and (2) no part of his or her compensation was, is or will be directly or indirectly related to the specific recommendations or views expressed in this report.

See the *Companies Mentioned* section for full company names.

### 3-Year Price, Target Price and Rating Change History Chart for 1211.SE



The analyst(s) responsible for preparing this research report received compensation that is based upon various factors including Credit Suisse's total revenues, a portion of which are generated by Credit Suisse's investment banking activities.

### Analysts' stock ratings are defined as follows\*\*\*:

**Outperform (O):** The stock's total return is expected to exceed the industry average\* by at least 10-15% (or more, depending on perceived risk) over the next 12 months.

**Neutral (N):** The stock's total return is expected to be in line with the industry average\* (range of  $\pm 10\%$ ) over the next 12 months.

**Underperform (U)\*\*:** The stock's total return is expected to underperform the industry average\* by 10-15% or more over the next 12 months.

*\*The industry average refers to the average total return of the relevant country or regional index (except with respect to Europe, where stock ratings are relative to the analyst's industry coverage universe).*

*\*\*In an effort to achieve a more balanced distribution of stock ratings, the Firm has requested that analysts maintain at least 15% of their rated coverage universe as Underperform. This guideline is subject to change depending on several factors, including general market conditions.*

*\*\*\*For Australian and New Zealand stocks a 7.5% threshold replaces the 10% level in all three rating definitions, with a required equity return overlay applied.*

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**Analysts' coverage universe weightings are distinct from analysts' stock ratings and are based on the expected performance of an analyst's coverage universe\* versus the relevant broad market benchmark\*\*:**

**Overweight:** Industry expected to outperform the relevant broad market benchmark over the next 12 months.

**Market Weight:** Industry expected to perform in-line with the relevant broad market benchmark over the next 12 months.

**Underweight:** Industry expected to underperform the relevant broad market benchmark over the next 12 months.

*\*An analyst's coverage universe consists of all companies covered by the analyst within the relevant sector.*

*\*\*The broad market benchmark is based on the expected return of the local market index (e.g., the S&P 500 in the U.S.) over the next 12 months.*

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| Global Ratings Distribution |     |                       |
|-----------------------------|-----|-----------------------|
| <b>Outperform/Buy*</b>      | 43% | (59% banking clients) |
| <b>Neutral/Hold*</b>        | 43% | (55% banking clients) |
| <b>Underperform/Sell*</b>   | 12% | (50% banking clients) |
| <b>Restricted</b>           | 2%  |                       |

*\*For purposes of the NYSE and NASD ratings distribution disclosure requirements, our stock ratings of Outperform, Neutral, and Underperform most closely correspond to Buy, Hold, and Sell, respectively; however, the meanings are not the same, as our stock ratings are determined on a relative basis. (Please refer to definitions above.) An investor's decision to buy or sell a security should be based on investment objectives, current holdings, and other individual factors.*

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*See the Companies Mentioned section for full company names.*

**Price Target:** (12 months) for (1211.SE)

**Method:** We used a DCF with a WACC of 9% over the expected life for Ma'aden's projects.

**Risks:** 1) Commodity risk: decline in commodities could affect cash-flows and valuations. 2) Project cost escalation risk: aluminum project runs this risk as building costs have not been locked-in, as is the case for the phosphate project. 3) Corporate governance/government risk: the Saudi government holding a 50% stake has the potential to affect Ma'aden's operations. 4) China policy reversal: if China removes its current tariffs on fertilizer exports, prices for DAP could fall, potentially affecting Ma'aden's cashflows and valuations.

### Important Regional Disclosures

The analyst(s) involved in the preparation of this report have not visited the material operations of the subject company (1211.SE) within the past 12 months.

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- Zeid Massad, non-U.S. analyst, is a research analyst employed by Credit Suisse Securities (Europe) Limited.

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