# Ko Yo Group

## *Dazhou, Dazhou, Dazhou!*

Headquartered in Chengdu, Sichuan province, Ko Yo (KY) is a regional chemical fertilizer manufacturer with principal products including bulk blend (BB) fertilizer and urea. Although its existing businesses, in our view, are somewhat steady, our interest is on the new Dazhou plant, which, with 450,000 urea capacity in phase I, has potential to substantially change KY's landscape. The Dazhou project was introduced to the market four years ago. Now it entered into the last stage, the final trial, which will launch soon. We think execution risk has been largely lowered and now the stock offers a sound risk / return tradeoff.

***Investment summary***

- Construction and testing of Dazhou plant was completed already. Final trial will kick off shortly.
- Mass production is planned in 2H. Profit contribution could reach RMB14.2m in FY12/10F and RMB58.3m in FY12/11F even under assumption that urea price will remain at current low level.
- We value the plant at RMB1,794m (HK$2,063m), compared with KY's overall market capitalization of HK$1,387.9m.
- Execution risk reduced substantially and is mostly controllable at this stage. The trial result is the only major uncertainty.
- FY12/09A earnings are shadowed by weak fertilizer price.

**Natural gas supply is convenient and has been secured for Dazhou plant.** The Dazhou project was initiated in 2006. Located in Dazhou, Sichuan province, the plant is designed to utilize local rich natural gas resources. It is connected to Sinopec's Puguang Gas Field ("普光氣田") nearby, which is one of the largest gas fields in China with annual natural gas production capacity of 12b $m^3$ (4b $m^3$ in 2010). According to the management, KY has reached agreement with Sinopec to purchase 450m $m^3$ gas from Puguang Gas Field each year. Price in 2010 is RMB1.28/$m^3$ (plus RMB0.07/$m^3$ pipeline distribution charge),

**Final trial will start soon and operation is expected to commence in 2H.** Dazhou plant's phase I construction was completed in 4Q 09 with a production line for 450,000 tonnes urea and 400,000 tonnes ammonia (~260,000 tonnes ammonia will be processed into urea and consumed internally). The plant can be further expanded in phase II to accommodate capacities of 800,000 tones urea and 470,000 tonnes ammonia (all for internal use). When we visited the plant in Mar., KY had just finished testing of each individual part of the production line. During our latest discussion with the management, we were told final trial of the whole device will launch in days. Accordingly, mass production is reasonably anticipated for 2H.

**Earnings contribution is estimated at RMB58.3m under current urea price.** According to the management's assessment, Dazhou plant's production cost for urea will be at ~RMB1,450/tonne (ammonia: ~RMB1,650/tonne) on a full operation basis. Based on present selling prices (urea: RMB1,650/tonne, ammonia: RMB2,050/tonne, excl. VAT tax), we estimate the plant can generate RMB57.9m and RMB145.6m gross profit in FY12/10F and FY12/11F, respectively, with corresponding net profit at RMB14.2m and RMB58.3m. Net profit will drop to RMB57.5m if phase II (urea capacity will enhance to 800,000 tonne and consume all ammonia internally) is implemented, because, under current price and cost structure, ammonia yields much better gross margin than urea (urea: 12.1%, ammonia: 19.5%).

| | |
|---|---|
| **Ticker** | **0827 HK** |
| **Rating** | **Not Rated** |
| Price (HK$) | 0.197 |
| Target Price (HK$) | n.a. |
| 12m Price Range (HK$) | 0.103-0.285 |
| Market cap. (US$m) | 177.9 |
| Daily t/o (US$m) | 1.4 |
| Free float (%) | 37.9 |

***Financial summary***

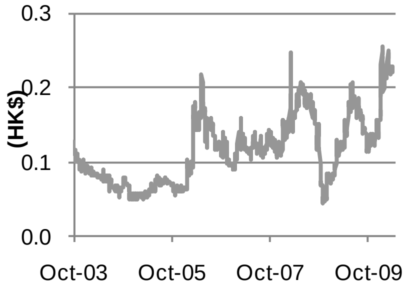
| Year to Dec | 07A | 08A |
|---|---|---|
| Turnover (RMBm) | 774.9 | 654.9 |
| Net Profit (RMBm) | 41.4 | 60.7 |
| EPS (RMB) | 0.016 | 0.010 |
| P/E (x) | 10.7 | 17.1 |
| P/B (x) | 1.43 | 1.39 |
| EV/EBITDA (x) | 20.0 | 14.4 |
| Yield (%) | 0.7 | 0.2 |
| ROE (%) | 7.0 | 8.4 |
| ROCE (%) | 6.7 | 8.2 |
| N. Gear. (%) | 36.0 | 29.6 |

*Source: SBI E2-Capital*

| | 09F | 10F | 11F |
|---|---|---|---|
| Consensus EPS (RMB) | 0.002 | 0.028 | 0.041 |
| Previous earnings (RMBm) | - | - | - |
| Previous EPS (RMB) | - | - | - |

***Price performance***

| Year to Dec | 1m | 3m | 12m |
|---|---|---|---|
| Relative to HSI (%) | -8.9 | -4.6 | +2.8 |
| Actual price changes (%) | -10.9 | -1.5 | +42.8 |




*Source: Bloomberg*

**Norman Zhang**
(852) 2533 3715
normanzhang@sbie2capital.com

**Table 1. Unit cost breakdown by raw materials (RMB/tonne)**

| | Ammonia | Urea |
|---|---|---|
| Natural gas | 1,310.0 | |
| Ammonia | | 957.0 |
| Utilities | 120.0 | 300.0 |
| Packaging | | 65.0 |
| Labor, depreciation and others | 220.0 | 128.0 |
| Total | 1,650.0 | 1,450.0 |

*Source: Company data*

**Table 2. Earings forecast for Dazhou plant**

| Year to Dec (RMB m) | 10F | 11F | 12F |
|---|---|---|---|
| Output (tonnes '000) | | | |
| Urea | 225.0 | 450.0 | 800.0 |
| Ammonia | 200.0 | 400.0 | 464.0 |
| | | | |
| Available for sales (tonnes '000) | | | |
| Urea | 225.0 | 450.0 | 800.0 |
| Ammonia | 69.5 | 139.0 | 0.0 |
| | | | |
| ASP (RMB/tonne) | | | |
| Urea | 1,650.0 | 1,650.0 | 1,650.0 |
| Ammonia | 2,050.0 | 2,050.0 | 2,050.0 |
| | | | |
| Revenue | 513.7 | 1,027.5 | 1,320.0 |
| Urea | 371.3 | 742.5 | 1,320.0 |
| Ammonia | 142.5 | 285.0 | 0.0 |
| COGS | (455.9) | (881.9) | (1,160.0) |
| Gross profit | 57.9 | 145.6 | 160.0 |
| Operating expenses | (41.1) | (77.1) | (92.4) |
| EBT | 16.8 | 68.5 | 67.6 |
| Tax | (2.5) | (10.3) | (10.1) |
| Net profit | 14.2 | 58.3 | 57.5 |

*Source: SBI E2-Capital*

**Dazhou plant can be cost effective.** Under a dynamic business environment (i.e. volatile urea price), urea producers' profitability depends on their relative cost base. We think KY has cost advantages against other gas-based players, because:

- Dazhou plant is close to the Puguang gas field, which can not only save pipeline distribution fees but also be helpful in ensuring a stable gas supply. The latter is particularly critical amid the context of frequent gas shortage in China.
- Major equipment is second-hand products imported from the U.S., which effectively brings down capital expenditure on Dazhou plant and, sequentially, depreciation expenses. Investment on fixed assets (phase I) totalled RMB897m, ~50% lower than industry average (~RMB2b).
- With single device scale at 450,000 tonne urea (800,000 tonnes in phase II), Dazhou plant enjoys economy of scale, especially compared with other Sichuan-based urea producers.

**Fair value is estimated at RMB1,794m.** Considering urea production line's capital-intensive character as well as final product's commodity nature, we try to price Dazhou plant through a P/B multiple approach. Average P/B ratio of two HK-listed urea producers is 2.0x. By using this ratio, we calculate a value of RMB1,794m based on the total RMB897m fixed asset investment of Dazhou plant. Although the RMB897m investment is not 100% equity-based (i.e. actual NAV should be less due to financial leverage), its impact on valuation can be offset by the fact that Dazhou plant's capital expenditure is ~50% lower than industry average. Thus, we picked the RMB1,794m (HK$2,063m) as the plant's fair value, which is 48.6% higher than KY's present market capitalization is HK$1,387.9m.

**Table 3. Valuation matrix**

| Company | Ticker | Market cap (US$m) | Historical P/E (x) | 1-Yr P/E (x) | 2-Yr P/E (x) | ROE (%) | P/B (x) |
|---|---|---|---|---|---|---|---|
| China XLX | 1866 HK | 425.6 | 24.5 | 10.5 | 7.9 | 8.2 | 2.0 |
| China Bluechem | 3983 HK | 2,819.2 | 20.0 | 13.8 | 10.5 | 9.9 | 2.0 |
| **Average** | | | | | | | **2.0** |
| | | | | | | | |
| Liaoning Tongda | 000059 CH | 2,006.9 | 70.9 | 18.4 | 12.7 | 3.2 | 2.2 |
| Sichuan Chemical | 000155 CH | 521.7 | n.a. | 8.6 | n.a. | 4.7 | 2.1 |
| Sichuan Meifeng | 000731 CH | 573.9 | 33.5 | 20.3 | 16.2 | 8.3 | 2.3 |
| Lutianhua | 000912 CH | 795.7 | 186.0 | 22.7 | 16.6 | 4.5 | 2.2 |
| Jiafeng Chemical | 000950 CH | 830.3 | 41.7 | 16.4 | 13.9 | 12.6 | 2.5 |
| Yuntianhua | 600096 CH | 1,829.8 | 61.9 | 28.5 | 16.0 | 1.9 | 2.8 |
| Cangzhou Dahua | 600230 CH | 576.9 | 43.6 | 15.6 | 12.4 | 6.0 | 3.4 |
| Chitianhua | 600227 CH | 876.4 | 32.3 | 29.3 | 18.9 | 7.7 | 1.8 |
| Average | | | | | | | 2.4 |

*Source: Bloomberg*

**Execution risk has substantially declined.** Apparently, the Dazhou project's execution risk is high, given its investment scale and capacity size both beyond KY's past experience. In particular, the project was delayed multiple times for different reasons, which further shook investors' confidence. Nevertheless, we see this risk was minimized after: 1) phase I construction was completed; 2) Puguang gas field started supplying natural gas; 3) every individual part of the production line was well tested. The remaining major uncertainty is that whether the mass production can launch in 2H as scheduled. As most problems, if any, may occur at the pure plant operation level, we regard them manageable and within KY's own control. The trial result will be available in Jun. We believe it is a major catalyst for the stock. A successful trial will surely boost investment sentiment and likely trigger re-rating on the stock.

**Weak FY12/09A results are foreseeable.** The company registered 11.7% decline in top line to RMB311.3m in 1H FY12/09A. Net profit retreated 75.6% to RMB9.4m. As fertilizer price remained soft in 2H, we do not expect any HoH improvement. The company will announce its full year results tomorrow.

**Table 4. Ko Yo's capacity expansion**

| Year to Dec (tonnes '000) | 08A | 10F |
|---|---|---|
| Urea | 170.0 | 620.0 |
| Ammonia | 130.0 | 530.0 |
| Sodium carbonate | 90.0 | 90.0 |
| Ammonium chloride | 100.0 | 100.0 |
| BB fertilizers & compound fertilizers | 700.0 | 700.0 |

*Source: Company data*

Chart 1. Dazou Plant


Chart 2. Dazou Plant

Chart 3. Dazou Plant


Chart 4. Dazou Plant

Chart 5. Dazou Plant

Chart 6. Dazou Plant