

Feeding the Dragon

See limited scope for grain production increases

We see two key ways that China can grow its grain output: increase planted area or improve productivity on existing land. However, (1) our study on time-series satellite imagery as well as anecdotal evidence suggest the arable land in China is not only below government estimates but continues to fall; (2) lack of scale and absence of genetically modified technology limits productivity gains. The average farm size in China is roughly 0.6ha versus 63ha in Brazil and 180ha in the US with significant institutional barriers to farm consolidation.

Filling protein gap: rising pork imports, the new normal

With limited grain output increase and steady consumption growth (5-year CAGR of 3%), we believe China's protein deficit is widening and importing pork may be an efficient way to fill the gap as it is (1) equivalent to importing soy / corn as feed as well as water, arable land and scale; (2) economical with landed cost 30% below domestic price; (3) subject to few import restrictions. If China monthly pork imports were to maintain at Nov 2011 level in 2012, China could account for over 16% of global trade.

How to invest in China's protein deficit?

Our global agriculture analysts, Fernando Ferreira and Ryan Oksenhendler, have identified Smithfield Foods (SFD US), Tyson Foods (TSN US) and Brasil Foods (BRFS US) as major beneficiaries of China's growing protein import needs. The US is the lowest cost producer of pork globally, driven by lower feed costs and production efficiencies due to the industrialization of hog farms; Smithfield and Tyson are the two largest players in the US. Brasil Foods is the largest pork exporter in Brazil, and already has one pork plant approved to export to China.

Will China apply more potash to boost yield? We think not

Without farm scale, testing nutrients levels in soil or compound fertilizers (NPK) is uneconomical; consequently, (1) potash under-application is likely to continue, (2) NPK blenders/producers will be able to reduce potassium content (the most expensive nutrient in the mix) to remain profitable. These factors will negatively impact potash consumption growth, which we forecast flat at 10mn/t in 2012. Due to weak potash demand in China and India, the two largest global importers, we predict roll over pricing at USD470/t for China's 1H12 potash contract.

Agri recommendations: China Agri > BlueChem > Sinofert

On the back of limited potash consumption growth in China, we downgrade Sinofert (297 HK) from Buy to Underperform on sluggish volume growth and margin pressure. We prefer BlueChem (3983 HK, Buy) due to its good earnings visibility. Separately, we anticipate crush margin to widen as food inflation bottoms out - this presents a good entry point for China Agri (606 HK, Buy).

Rating Change

Equity | Asia Pacific | Food
30 January 2012

**Bank of America
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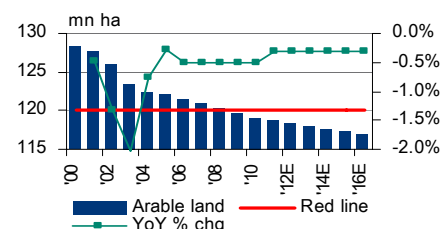
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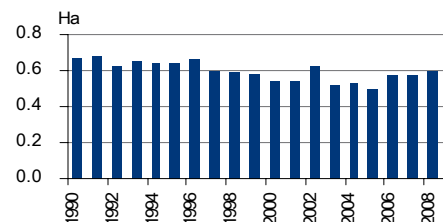
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Chart 1: Arable land in China



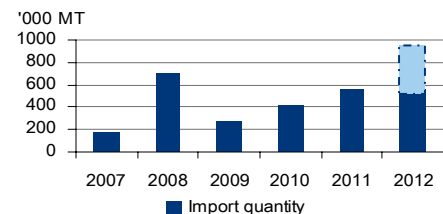
Source: Ministry of Land and Resources, BofA Merrill Lynch Global Research

Chart 2: Average farm size in China



Source: China Water Risks

Chart 3: China pork imports



Source: USDA, BofA Merrill Lynch Global Research

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Refer to important disclosures on page 57 to 59. Analyst Certification on Page 54. Price Objective Basis/Risk on page 53. Link to Definitions on page 54. 11131270

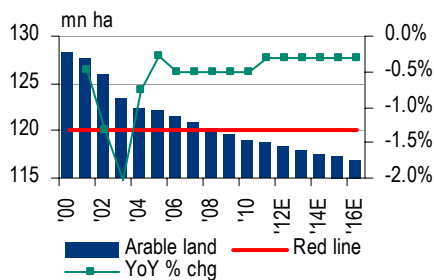
Contents

Investment thesis	3
Pork analysis	9
Poultry analysis	14
Potash update and outlook	16
Urea update and outlook	19
Phosphate update and outlook	21
Arable land analysis	23
Corn supply/demand analysis	25
Soybean supply/demand analysis	28
Wheat supply/demand analysis	32
Rice supply/demand analysis	34
Biotechnology in China	36
Grain policies	37
Sinofert HLDG	38
China BlueChem	43
China Agri-Industries Hldgs	48
Asian Citrus Holdings Ltd.	51

* For full definitions of *iQmethod*SM measures, see page 56.

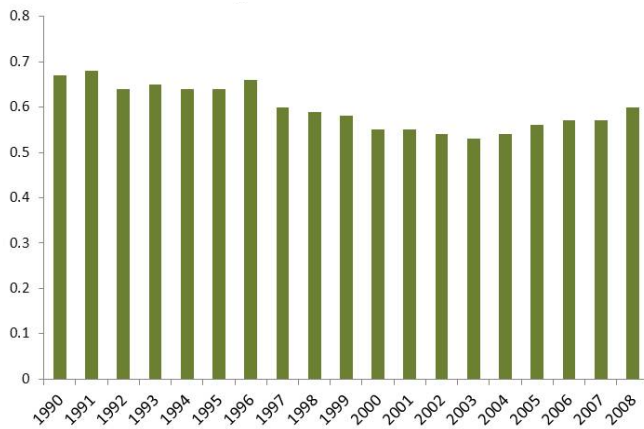
- 1) See limited scope for grain production increases in China due to declining arable land and limited productivity gains
- 2) Expect protein deficit to grow and pork imports (as an efficient way to fill the gap) to accelerate
- 3) Potash consumption to remain stagnant; expect roll over pricing at USD470/t for 1H12 contract; negative for Sinofert
- 4) Crush margins to widen: Buy China Agri

Chart 4: Arable land in China



Source: Ministry of Land and Resources, BofA Merrill Lynch Global Research

Chart 5: Average farm size in China (ha)



Source: China Water Risk

Investment thesis

We see limited scope for grain production increases in China with declining arable land and limited productivity gains. With steady consumption growth, we expect China's protein deficit to widen and believe importing pork is an efficient way to fill the gap. This will have a positive read-through to Smithfield Foods (SFD US), Tyson Foods (TSN US) and Brasil Foods (BRFS US). Additionally, without farming scale, we may see potash consumption to remain stagnant and expect a roll over pricing at USD470/t for China's 1H12 import contract. Our view has significant negative read through for Sinofert's (297 HK, Underperform) distribution margin and earnings growth.

See limited scope for grain production increases

We see two ways that China can grow its grain output: increase arable land or improve productivity on existing land. However, (1) our study on time-series satellite imagery as well as anecdotal evidence suggest the arable land in China not only below government estimates but continues to fall; (2) lack of scale and absence of wide adoption of genetically modified technology limits productivity gains. The average farm size in China is roughly 0.6ha versus 63ha in Brazil and 180ha in the US with significant institutional barriers to farm consolidation.

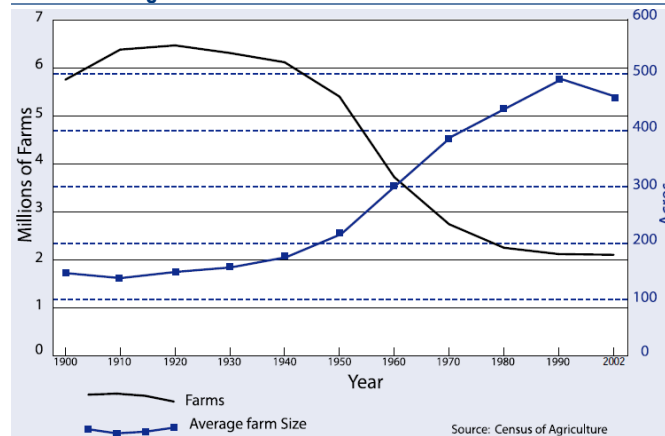
Arable land may already be below the "red line"

The Chinese government defines the "red line" for arable land, 120mn ha, as the critical level to ensure grain self-sufficiency. We estimate arable land has already fallen below this level, and will decrease to 117mn ha by 2016. We have analyzed time-series satellite imagery for China's 50 largest cities by population and believe urban sprawl, desertification and illegal commercial conversion has lead to an 0.5% CAGR decline from 2004-10 and forecast a 0.3% decline until 2016.

Average farm size in China to remain small

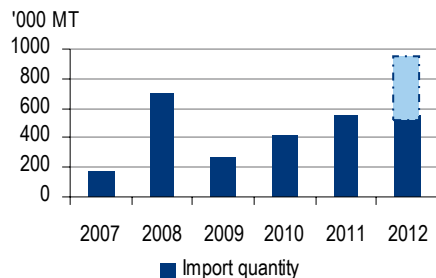
The average farm size in China is roughly 0.6ha versus 180ha in the US. There are two barriers to farm consolidation: (1) urban registration "Hukou" system - migrant workers do not usually settle families in cities because without a resident permit they cannot get equal access to education, healthcare, housing etc. and consequently, they do not sell their land as they will ultimately return; (2) lack of transparent liquid legal enforceable system for transferring rural land use rights.

Chart 6: Average farm size in the US



Source: US Census of Agriculture

Chart 7: China pork consumption



Source: USDA, BofA Merrill Lynch Global Research

Note: Light blue area represents potential imports in 2012 if monthly imports were to maintain at November level of 80,000/t

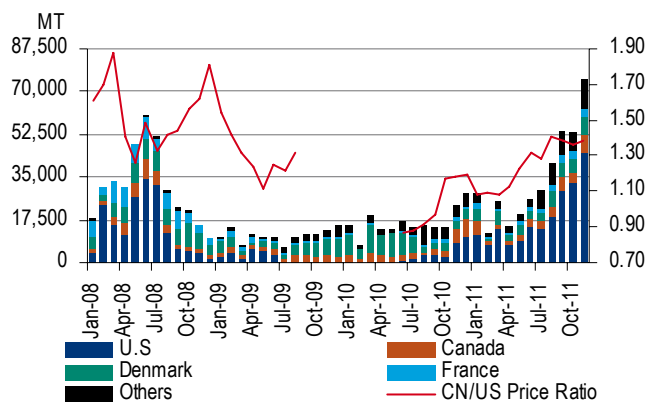
Increasing pork imports should become the new normal

We believe that China could be an increasingly important pork importer, and the volume may impact international prices. China's pork imports in the first 11 months of 2011 were 378,000/t, up 120% YoY. We think the imports will continue to accelerate for the following reasons:

- China is increasingly importing more protein (only 20% self-sufficient soybean) and imported 2mn/t of corn in the last two month of MY11. Importing pork is an efficient way for China to import protein as not only does it include the soy / corn feed used to raise the hog, it also includes water, arable land and scale, all items which China is short of.
- It is economical to import pork. As a consequence of soy and corn prices that are 50-60% higher than int'l prices, the cost of production is much higher in China. This and a lack of scale (on average 10 head per farm) create an arbitrage opportunity for landed pork – domestic price is 30% higher than landed pork price including tariffs, loading / unloading, shipping costs.
- Lack of regulation. Unlike chicken and grain there are no import quotas for pork. The processing industry is reasonably free to import without restrictions.
- China is licensing more slaughtering houses in both Brazil and Europe.

If China pork imports were to maintain at November level of 80,000/t each month in 2012, China could account for more than 16% of global trade.

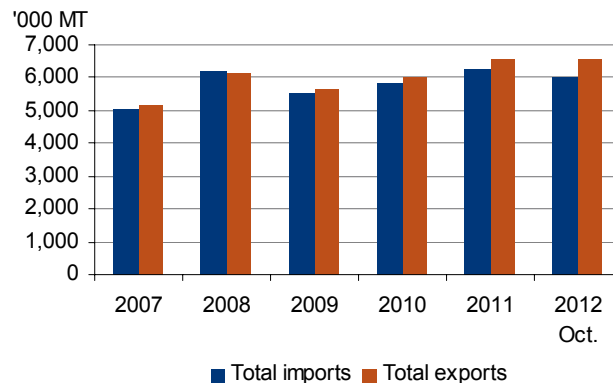
Chart 8: China / US pork price ratio vs. China's pork imports



Source: Bloomberg, CEIC

Note: China cut pork import tariff to 6% from Jun 2008 to Dec 2008 and imposed a ban on imports of U.S pork from Jun 2009 to May 2010

Chart 9: World pork trade



Source: USDA

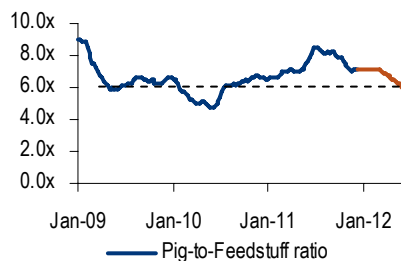
How to invest in China's protein deficit?

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Pork price downward trend likely to continue

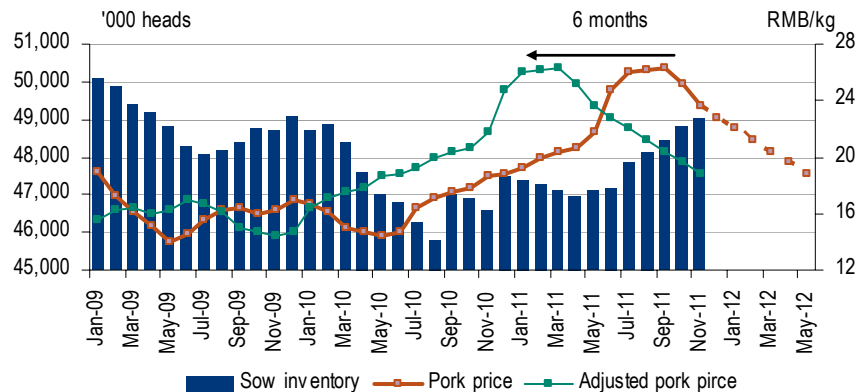
We believe the downward trend for the pork price is likely to continue for at least another six months given rising sow inventory since mid-2011. Historically, the pork price has had a clear inverse relationship with sow inventory, if we had adjusted the pork price six months backward to account for the time lag. In our base case, we project 18% downside potential from the current pork price by mid-2012. Our estimate is based on corn futures price on the Dalian Commodity Exchange for July 2012 delivery and a 6.0x pork-to-feed ratio that the government targets to maintain to protect hog raisers' profitability.

Chart 11: Pig-to-feed ratio



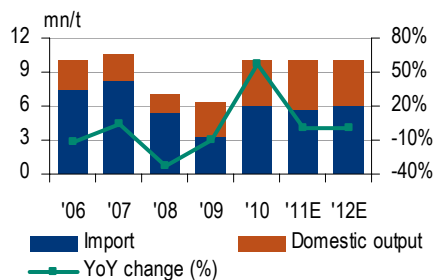
Source: CEIC, BofA Merrill Lynch Global Research

Chart 10: Sow inventory is a leading indicator to pork price



Source: CEIC, BofA Merrill Lynch Global Research

Chart 12: China potash consumption (mn/t)



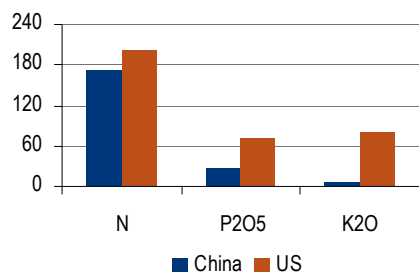
Source: CEIC, BofA Merrill Lynch Global Research

Will China apply more potash to boost yield? We think not

We forecast China's potash consumption to remain flat at 10mn/t in 2012 as we believe (1) direct application of potash will stay low and (2) blenders are likely to reduce potassium (K) content in NPK fertilizers.

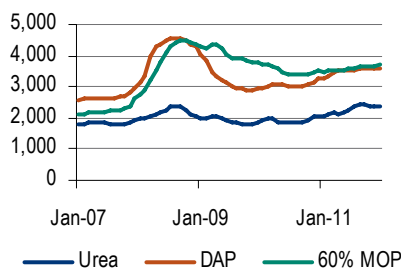
- Previously, we thought a reverse of potash under-application would drive domestic consumption growth as China only applies 6% of the amount of potash US applies on corn and 38% on soybean. However, with an average farm size at 0.6ha, it is not economical to test soil and without recognizing potash deficiency in soil, direct application of potash is likely to stay low.
- Prior to 2007, K was relatively inexpensive as compared to the other two nutrients. Consequently there was little incentive for NPK blenders to reduce K content in the mix. Now it is the most expensive. Using current 15-15-15 NPK market prices, blenders are almost loss making on a per tonne basis. This leads us to believe that blenders will reduce potassium content to maintain profitability. As NPK accounts for 60-70% of total potash applications, this will meaningfully impact demand and thus the domestic price of potash.

Chart 13: Application on corn (kg nutrient / ha)



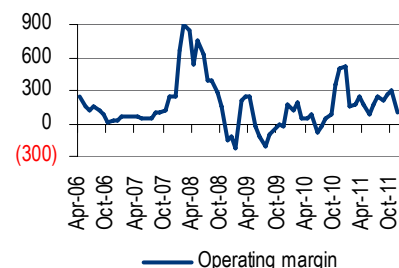
Source: IFA, BofA Merrill Lynch Global Research
Note: N=Nitrogen, P2O5=Phosphate and K2O=Potash

Chart 14: Retail prices of fertilizers (RMB/t)



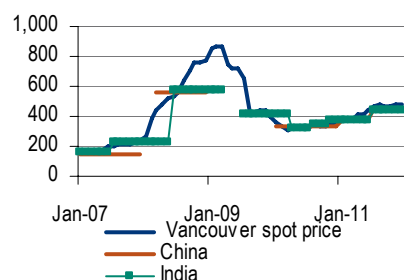
Source: CEIC

Chart 15: NPK prod operating margin (RMB/t)



Source: CEIC, BofA Merrill Lynch Global Research

Chart 16: Regional potash prices (US\$/t)



Source: BofA Merrill Lynch Global Research

Roll over potash pricing with risk to the downside

We expect roll over pricing at USD470/t for China's 1H12 potash contract with risk to the downside due to weak pricing in China and lower than expected demand in India, and thus globally.

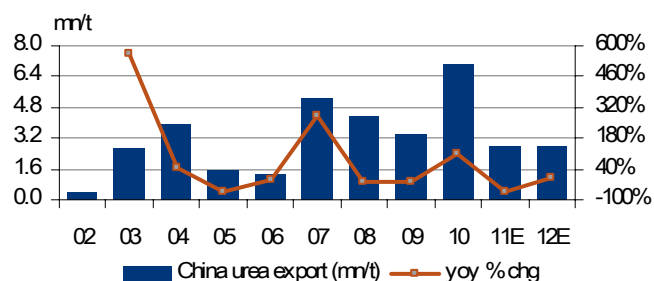
- China's current potash price stands at US\$470/t and domestic producers have been lowering prices. We don't think Sinofert will settle at a price that would result in a per tonne losses.
- Additionally, Indian demand may come in lower than expected on subsidy cut. India's Inter-Ministerial Committee has approved a proposal to reduce the subsidy on DAP and MOP; the consequent increase in retail prices may lead to demand destruction in our view.

On the other hand, upside risk comes from coordinated production cuts by major producers: Potash Corp scheduled 14 weeks of maintenance shutdown, equivalent to 8% of its full-year output or 1.5% of global supply; Uralkali reduced its 2012 production target by 7%

Cautious on 2012 urea & phosphate exports

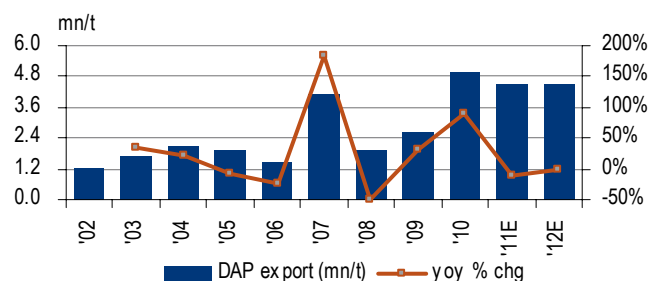
We expect China's 2012 urea and phosphate exports to remain flat YoY due to unattractive export netbacks relative to domestic sales as the ex-factory prices in the country will be supported by rising production costs while international prices are expected to soften on weaker farmer P&L. Given the weak export outlook, we forecast the 2012 urea price at RMB2100/t (US\$323/t), up 5% YoY and DAP price to remain flat at the current level of RMB3200/t, (US\$492/t).

Chart 17: China urea export



Source: CEIC, BofA Merrill Lynch Global Research

Chart 18: China phosphate fertilizer export



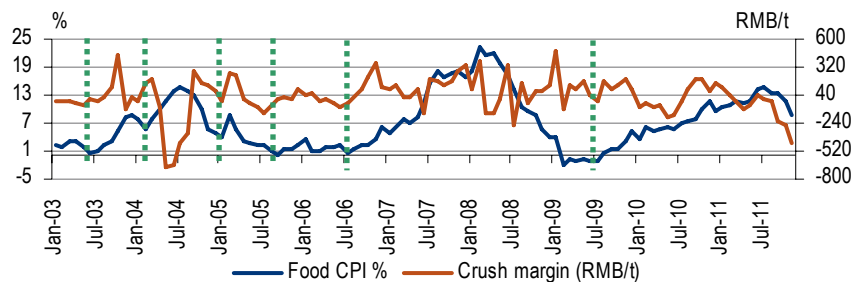
Source: CEIC, BofA Merrill Lynch Global Research

Crush margin: The key driver for soybean demand

Around 80% of soybean in China is crushed to produce soybean oil, a major type of vegetable oil consumed in the country, and soy meal, a key input to produce industrial feed. Therefore, soybean demand is determined by the crushing margin, a result of the dynamics between soybean, soy oil and soy meal pricing.

We note that historically the crush margin picked up when food inflation bottomed out (indicated by the vertical line in Chart 19); however the up-cycle lasted roughly four months on average before reaching the inflection point – consistent with the length of the production cycle (ordering and shipping soybean from overseas and crushing).

Chart 19: Crush margin versus food inflation in China



Source: Bloomberg, BofA Merrill Lynch Global Research

Table 1: Valuation comparison of China agricultural companies

US\$m		Mkt			Net	P/E				EV/EBITDA				Div				ML		
Co. Name	Ticker	Cap	px_last	Sales	Profit	FY0	FY1	FY2	FY3	P/B	FY0	FY1	FY2	FY3	Yield	ROE	Year End	Symbol	REC.	QRQ
FERTILIZERS																				
CHINA BLUECHEM-H	3983 HK	3,411	5.7	1,083.3	185.4	19.5	11.5	10.7	9.1	2.1	8.7	5.6	5.1	4.4	1.8	11.6	12/2010	CBLUF	Buy	C-1-7
SINOFERT HOLDING	297 HK	2,055	2.3	4,617.6	84.6	26.0	11.1	15.1	12.6	1.0	61.1	15.0	21.3	19.5	0.0	4.3	12/2010	SNFRF	Buy	C-3-7
SICHUAN MEIFEN-A	000731 CH	549	6.9	496.8	14.9	19.9	13.0	10.4	7.6	1.7	9.3	n/a	n/a	n/a	n/a	5.6	12/2010	n/a	n/a	n/a
SHANDONG HUALU-A	600426 CH	1,272	8.4	699.1	37.6	18.9	19.0	11.1	7.8	1.6	8.8	9.8	7.6	6.2	n/a	6.7	12/2010	SHCIF	n/a	HOLD
HUBEI YIHUA CH-A	000422 CH	1,872	18.9	1,701.4	84.6	13.8	12.3	10.1	8.2	2.8	13.6	10.2	8.4	7.1	n/a	23.4	12/2010	n/a	n/a	n/a
LUXI CHEMICAL-A	000830 CH	1,345	5.8	1,129.9	31.3	27.4	19.3	13.8	10.7	1.7	9.1	8.5	7.2	6.3	n/a	8.6	12/2010	n/a	n/a	n/a
HEBEI CANGZHOU-A	600230 CH	327	8.0	381.1	14.1	27.0	n/a	n/a	n/a	1.7	12.4	n/a	n/a	n/a	n/a	8.2	12/2010	n/a	n/a	n/a
GUIZHOU CHITIA-A	600227 CH	623	4.1	196.1	18.5	12.2	18.8	15.3	13.8	1.2	9.5	n/a	n/a	n/a	n/a	4.6	12/2010	n/a	n/a	n/a
TAIWAN FERTILIZE	1722 TT	2,506	76.1	458.5	54.8	77.3	22.1	19.5	19.3	1.5	11.3	45.0	30.5	37.1	n/a	3.5	12/2010	n/a	n/a	n/a
CHINA XLX FERTIL	CXLX SP	271	0.3	421.3	21.4	10.9	10.2	8.7	6.9	1.0	15.0	6.3	5.0	4.0	n/a	9.4	12/2010	CXLFF	n/a	HOLD
QINGHAI SALT-A	000792 CH	8,168	32.5	678.0	163.7	5.4	15.9	12.8	9.4	3.8	5.0	12.5	8.8	7.3	n/a	32.2	12/2010	n/a	n/a	n/a
YUNNAN YUNTIAN-A	600096 CH	1,646	15.0	1,052.6	26.9	25.1	44.1	29.1	29.4	1.6	12.0	11.8	10.3	9.7	n/a	4.0	12/2010	n/a	n/a	n/a
Average						23.6	17.9	14.2	12.3	1.8	14.6	13.9	11.6	11.3	0.9	10.2				
FOOD PROCESSERS																				
CHINA AGRI-INDUS	606 HK	3,316	6.4	6,898.0	219.4	15.6	9.3	8.5	7.6	1.4	20.9	9.2	7.8	6.9	1.7	9.7	12/2010	CIDHF	Buy	C-1-8
CHINA FOODS LTD	506 HK	2,178	6.1	2,568.7	55.0	30.0	25.3	19.5	15.4	2.7	14.3	11.9	9.5	7.7	1.2	7.5	12/2010	n/a	n/a	n/a
CHINA GREEN	904 HK	259	2.3	306.3	90.9	3.5	3.1	2.6	2.4	0.5	2.1	1.9	1.6	1.4	7.8	20.4	04/2011	CIGEF	n/a	-6-
CHAODA MODERN	682 HK	467	1.1	1,020.0	535.9	0.7	n/a	n/a	n/a	0.1	14.3	0.1	0.1	0.1	8.6	19.3	06/2010	n/a	n/a	n/a
CHINA YURUN FOOD	1068 HK	3,012	12.8	2,764.0	351.2	7.5	9.7	8.7	7.1	1.5	14.3	6.8	5.9	4.9	3.3	23.9	12/2010	n/a	n/a	n/a
DACHAN FOOD ASIA	3999 HK	175	1.3	1,411.4	16.2	10.1	n/a	n/a	n/a	0.7	14.3	n/a	n/a	n/a	3.1	7.0	12/2010	n/a	n/a	n/a
AGFEED INDUSTRIE	FEED US	25	0.4	243.6	-42.7	n/a	n/a	n/a	n/a	0.2	14.3	n/a	n/a	n/a	0.0	-31.3	12/2010	n/a	n/a	n/a
ZHONGPIN INC	HOGS US	n/a	n/a	946.7	58.3	5.9	5.9	4.8	4.0	0.9	14.3	5.5	4.4	4.9	0.0	17.5	12/2010	n/a	n/a	n/a
HENAN SHUAN-A	000895 CH	6,243	65.1	5,419.6	161.0	64.3	46.4	19.1	13.7	11.5	14.3	22.5	10.8	8.4	n/a	34.2	12/2010	n/a	n/a	n/a
XIWANG SUGAR	2088 HK	153	1.2	481.3	31.0	4.4	4.5	4.1	7.4	0.5	14.3	n/a	n/a	n/a	0.0	12.2	12/2010	n/a	n/a	n/a
GLOBAL SWEETENER	3889 HK	181	0.9	432.0	11.5	8.2	5.1	5.0	4.2	0.5	14.3	n/a	n/a	n/a	0.0	5.0	12/2010	n/a	n/a	n/a
CHINA MINZHONG	MINZ SP	411	0.9	291.2	85.5	4.5	3.7	2.8	2.3	0.9	14.3	2.8	2.1	1.7	0.0	21.8	06/2011	n/a	n/a	n/a
LE GAGA HLDG-ADR	GAGA US	193	4.2	60.7	19.9	7.0	6.2	4.1	3.2	1.0	14.3	2.7	1.8	1.3	0.0	14.3	03/2011	GAGA	n/a	n/a
ASIAN CITRUS HOL	73 HK	673	4.3	222.8	80.8	3.5	3.6	2.9	2.4	0.6	1.5	1.4	1.1	0.9	2.1	9.0	06/2010	XCHUF	Buy	C-1-8
Average						12.7	11.2	7.5	6.3	1.6	13.0	6.5	4.5	3.8	2.1	12.2				
MACHINERY																				
FIRST TRACTOR-H	38 HK	879	8.1	1,497.2	80.1	10.1	12.7	9.9	8.2	1.7	14.3	8.6	6.6	5.4	1.2	18.4	12/2010	n/a	n/a	n/a
All peer average						19.3	16.0	11.9	10.2	1.8	14.2	11.2	8.9	8.3	2.2	11.1				

Source: Bloomberg, BofA Merrill Lynch Global Research

Pork analysis

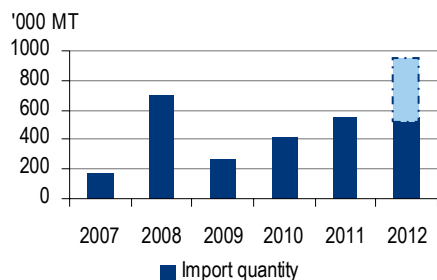
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We believe that China could be an increasingly important pork importer, and the volume may impact international prices. China's pork imports in the first 11 months of 2011 were 378,000/t, up 120% YoY. We think the imports will continue to accelerate for the following reasons:

- China is increasingly importing more protein (only 20% self-sufficient soybean) and imported 2mn/t of corn in the last two month of MY11. Importing pork is an efficient way for China to import protein as not only does it include the soy / corn feed used to raise the hog, it also includes water, arable land and scale, all items which China is short of.
- It is economical to import pork. As a consequence of soy and corn prices that are 50-60% higher than int'l prices, the cost of production is much higher in China. This and a lack of scale (on average 10 head per farm) create an arbitrage opportunity for landed pork – domestic price is 30% higher than landed pork price including tariffs, loading / unloading, shipping costs.
- Lack of regulation. Unlike chicken and grain there are no import quotas for pork. The processing industry is reasonably free to import without restrictions.
- China is licensing more slaughtering houses in both Brazil and Europe.

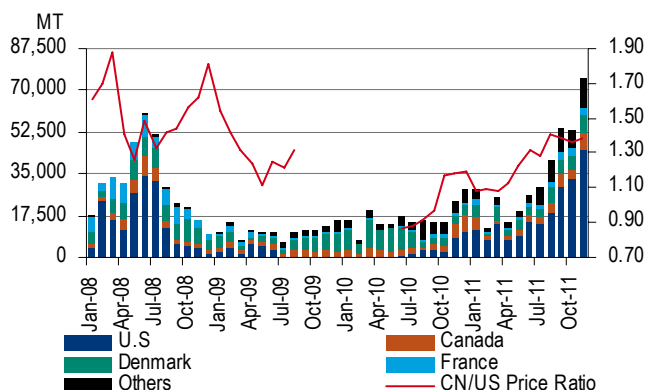
If China pork imports were to maintain at November level of 80,000/t each month in 2012, China could account for more than 16% of global trade.

Chart 20: China pork consumption



Source: USDA, BofA Merrill Lynch Global Research

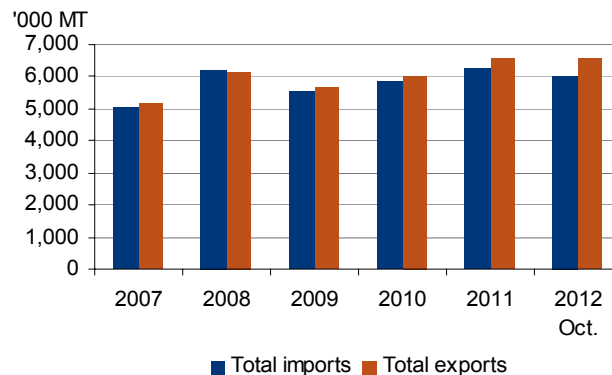
Chart 21: China / US pork price ratio vs. China's pork imports



Source: Bloomberg, CEIC

Note: China cut pork import tariff to 6% during Jun-Dec '08 and imposed a ban on US imports for Jun '09-May '10.

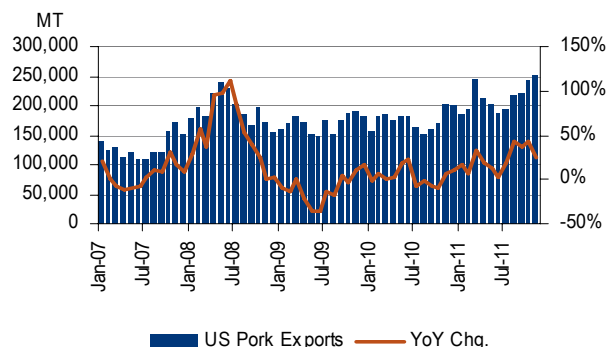
Chart 22: World pork trade



Source: USDA

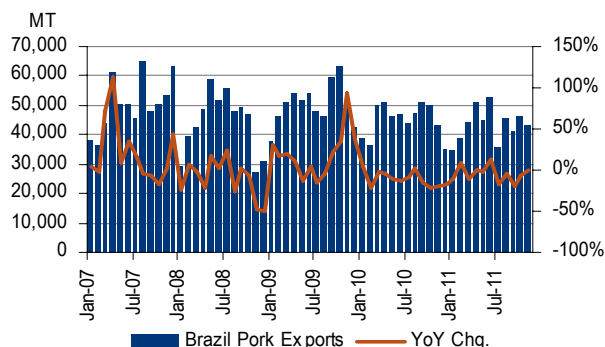
30 January 2012

Chart 23: US pork exports



Source: USDA, BofA Merrill Lynch Global Research

Chart 24: Brazil pork exports



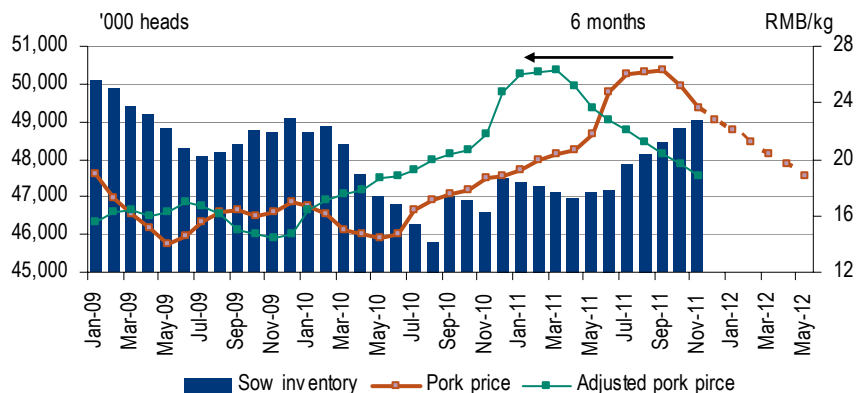
Source: ABIPECS, BofA Merrill Lynch Global Research

Pork price: Downward trend likely to continue

We believe the downward trend of the pork price is likely to continue for another six months at least given the rising sow inventory since mid-2011. Historically, the pork price would have had a clear inverse relationship with sow inventory, if we had adjusted the pork price six months backward to account for the time lag.

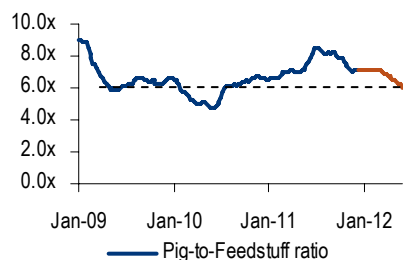
The lag could be explained by the supply response time starting from a hog farmer adding sow inventory; it takes six months for sows' pregnancy and lactation before the actual supply of piglets to the market increases. After six months, the piglet price falls with rising supply, which feeds into the anticipation of lower pork prices.

Chart 26: Sow inventory is a leading indicator to pork price



Source: CEIC, BofA Merrill Lynch Global Research

Chart 25: Pig-to-Feedstuff ratio



Source: CEIC, BofA Merrill Lynch Global Research

Base case: 18% downside potential

In our base case, we project 18% downside potential from the current pork price by mid-2012. Our estimate is based on corn futures price on the Dalian Commodity Exchange for July 2012 delivery and 6.0x pork-to-feed ratio that the government targets to maintain to protect hog raisers' profitability. However, with limited storage facilities, the amount of pork the government can buy and store is relatively insignificant compared to domestic consumption and the pork-to-feed ratio fell to as low as 4.5x around mid-2010. Our worst case assumes a repeat of 2010 and would imply 39% downside to the current price. On the other hand, a major

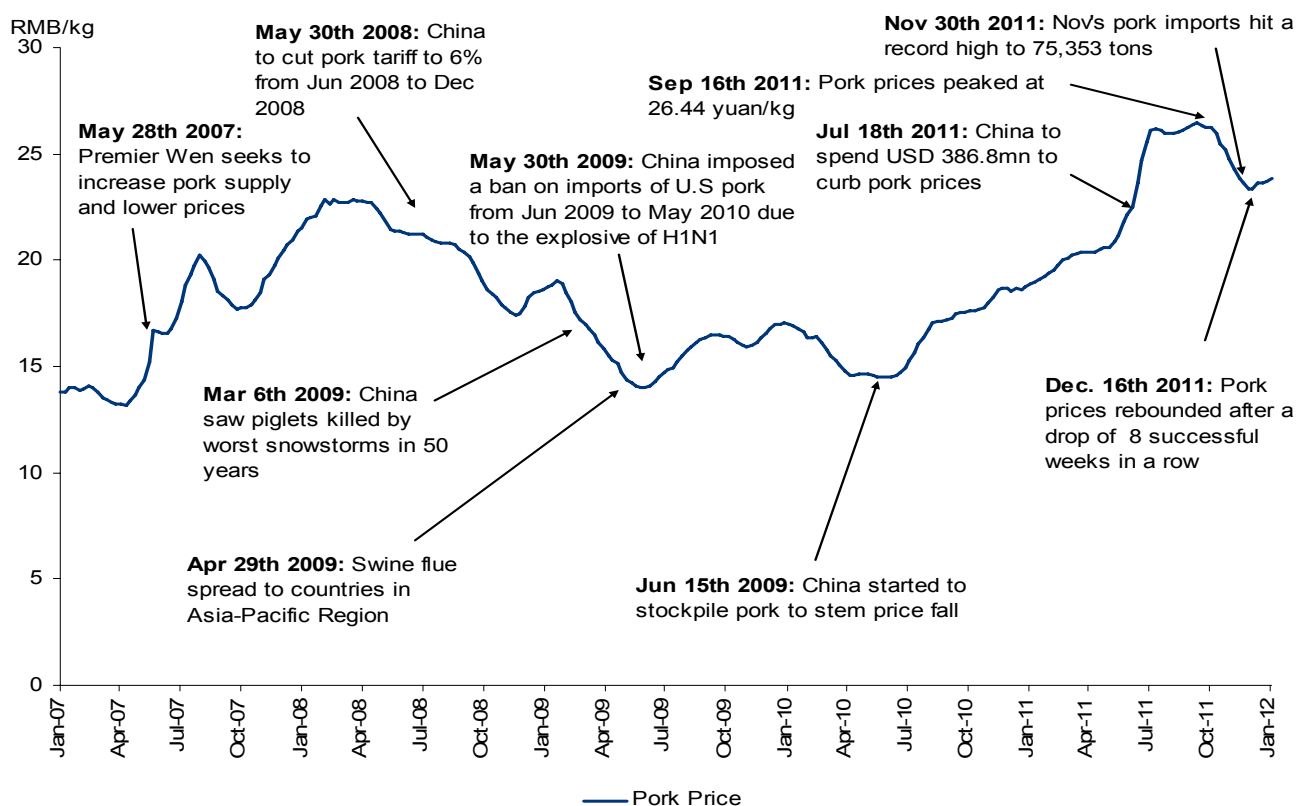
upside risk is the unexpected explosion of pig diseases. For example, the blue ear disease can kill 90% of pigs in a farm in two weeks without much pre-warning.

Table 2: Sensitivity analysis of pork price to pig-to-feedstuff ratio

			Base		
Feedstuff price (RMB/kg)	2.24	2.24	2.24	2.24	2.24
Pork-to-feed ratio	4.0x	5.0x	6.0x	7.0x	8.0x
Pork price forecast (RMB/kg)	12.53	15.66	18.79	21.92	25.05
Implied % downside / (upside)	45%	32%	18%	4%	-9%
Current pork price (RMB/kg)	22.95	22.95	22.95	22.95	22.95

Source: BofA Merrill Lynch Global Research

Chart 27: China pork price event chart



Source: BofA Merrill Lynch Global Research

How to invest in China's protein deficit?

Our global agriculture analysts, Fernando Ferreira and Ryan Oksenhendler, have identified Smithfield Foods (SFD US), Tyson Foods (TSN US) and Brasil Foods (BRFS US) as the major beneficiary of China's growing protein import needs.

Smithfield Foods

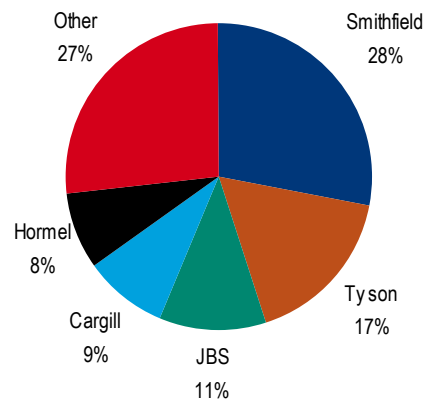
We believe Smithfield Foods (SFD) would be the primary beneficiary of an increase of pork imports by China, as the company is the largest hog producer and pork processor in the US. The US is the lowest cost producer of pork globally, driven by lower feed costs and production efficiencies due to the industrialization of hog farms. Smithfield produces roughly 16 million hogs on

annual basis (14% market share), and processes roughly 33 million hogs (28% market share). Given that Smithfield is vertically integrated, rising demand for pork would be beneficial to profits for both the Fresh Pork and Hog Production segments. Exports account for roughly one-third of Fresh Pork sales, and an even larger percentage of profits, as exports are margin enhancing for SFD due to the higher price placed on certain cuts in the international markets.

Tyson Foods

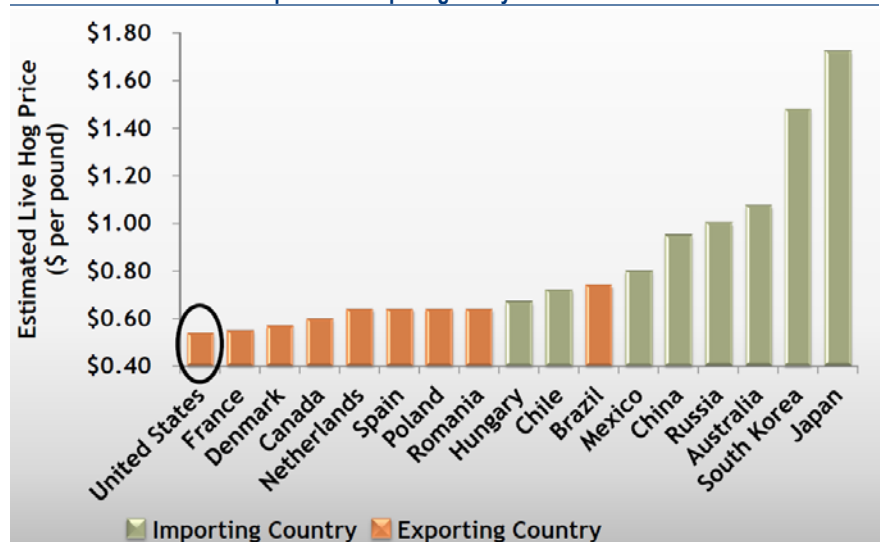
Tyson Foods (TSN) would also be a beneficiary of increasing pork imports by China, as the second largest US pork process with a 17% market share. Tyson is one of the most efficient US pork processors from a cost perspective, historically outperforming industry margins.

Chart 28: US Pork Processing Market Share



Source: National Pork Board Spring 2009, Smithfield Foods

Chart 29: US is the low cost producer of pork globally



Source: Smithfield Foods
Note: Week Ended 1/15/11

Brasil Foods

We see Brasil Foods (BUY – C-1-7, BRFS) as a major beneficiary of China becoming a net importer of both chicken and pork. Brasil Foods is the largest poultry exporter in the world, with a 13% market share of the global trade. The company is also the largest pork exporter in Brazil, and already has one pork plant approved to export to China. The company announced last year that is investing in its local platform in China, with a JV with DCH for processing and distribution of its products in mainland China.

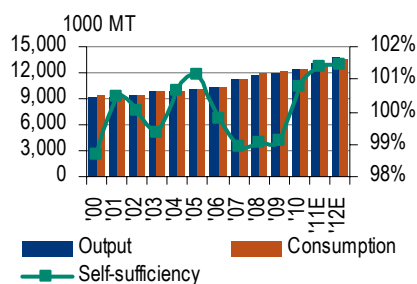
Currently, fresh poultry and pork exports account for 32.5% of the company's total revenues, while exports of processed products account for 7.5%. According to BRF-15 (strategic plan for 2015), the company plans to continue to focus on the international market by increasing its share on exports and also by increasing the sale of processed food products by building a local platform, mainly via M&A. Once such plan is concluded, the international market should then account for 50% of total revenues.

Poultry analysis

SD in balance; S. America as major source of imports

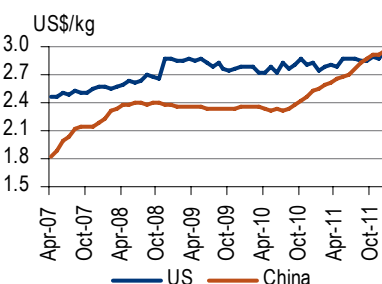
China's supply and demand for broiler meat is roughly in balance and we do not see significant upside in the near term due to steady domestic output growth (at 3.4% CAGR since 2000) and no apparent arbitrage opportunities. China's imports are mainly dominated by chicken claws and wings. Due to its anti-dumping duties (AD effective Feb. 2010) and countervailing duties (CVD effective Aug. 2010) imposed on US broiler products, 2011 imports from the US fell by 20% YoY while South America became the major sourcing origin with Brazil and Argentina combined accounting for 82%. With these measures likely to carry on into 2012, we expect South America's dominance to continue.

Chart 30: Supply and demand of broiler meat in China



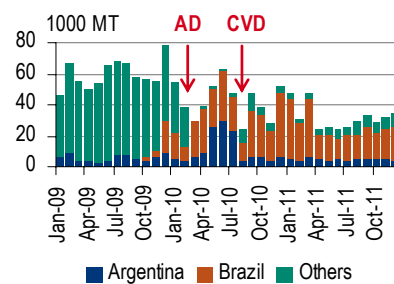
Source: USDA

Chart 31: China versus US whole bird price (US\$/kg)



Source: Bloomberg, CEIC

Chart 32: China's imports of frozen chicken & chicken meat by origin

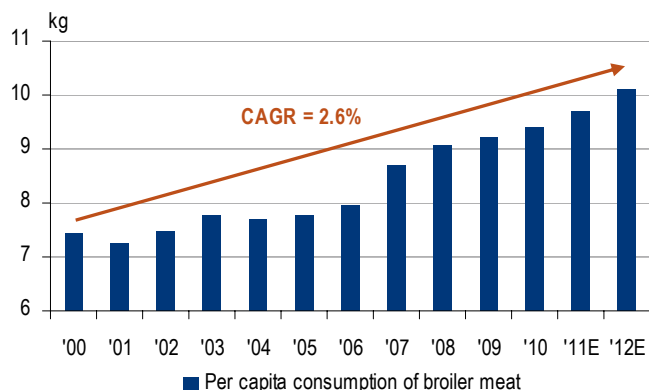


Source: China Customs

Further growth potential of broiler meat demand

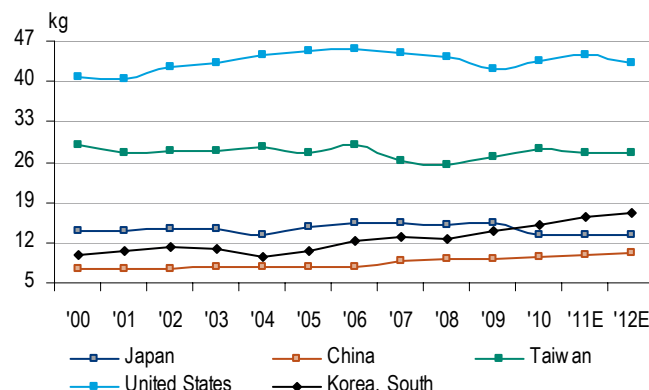
The per capita consumption of broiler meat has risen at 2.6% CAGR since 2000 and we believe there is further growth potential as China's 2011E per capita consumption of 9.7kg still remains 27-65% below that of Japan, South Korea and Taiwan (with similar dietary habits as China).

Chart 33: China's per capita consumption of broiler meat



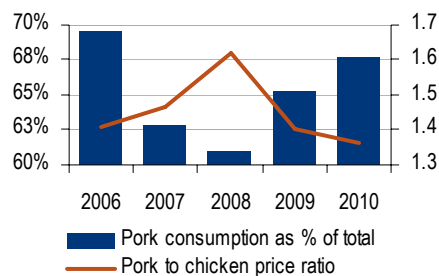
Source: USDA

Chart 34: Broiler meat per capita consumption comparison



Source: USDA

Chart 35: Substitution btw pork and chicken



Source: CEIC, BofA Merrill Lynch Global Research

Substitution between pork and poultry consumption

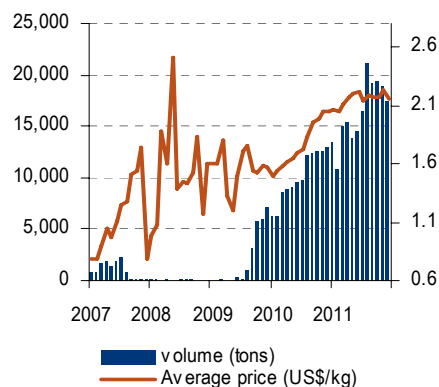
Pork consumption tends to be substituted by poultry (more likely than by any other type of meat) when pork is relatively expensive. Historically, beef and mutton as % of total meat consumption in China remains stable while % pork and % poultry have an inverse relationship (see table 3). Particularly in 2008 when pork-to-chicken price ratio peaked, pork consumption as % of total dropped to 61% while poultry increased to 26%.

Table 3: Livestock sales per capita (Kg)

	Pork		Poultry		Beef		Mutton		Total
2006	34.4	70%	8.9	18%	3.1	6%	3.1	6%	49.5
2007	27.6	63%	10.2	23%	3.0	7%	3.0	7%	43.8
2008	25.4	61%	10.8	26%	2.8	7%	2.6	6%	41.6
2009	31.7	65%	11.4	23%	2.7	6%	2.8	6%	48.6
2010	33.1	68%	10.5	21%	2.6	5%	2.8	6%	48.9
5-year Avg.	30.4	65%	10.3	22%	2.8	6%	2.9	6%	46.5

Source: CEIC

Chart 36: Bz chicken exports to China rising fast



Source: Brazil's trade ministry

Brazil to benefit from increased chicken imports

Brazil is the largest poultry exporter globally with 38% of share and the fourth largest pork exporter with 10% of share. The main markets for the Brazilian poultry are Saudi Arabia and Japan, while for pork exports are Russia and Ukraine. Hong Kong also is an important market, accounting for 8% and 26% of total poultry and pork exports, respectively, and is the main entrance for Brazilian protein into the Chinese market. However, Chinese direct protein imports from Brazil already started to rise, mainly for poultry, which were up 36% in 2011.

Potash update and outlook

We expect China's 1H12 import contract to settle at US\$470/t with risk to the downside. Stock build in China, which we estimate at 4mn/t, may lead to protracted negotiation. In terms of the long-term outlook, we expect flattish consumption due to continued under-application of potash and NPK producers' potential reduction of potassium content in blending.

Roll over potash pricing with risk to the downside

We expect roll over pricing at USD470/t for China's 1H12 potash contract with risk to the downside due to weak pricing in China and lower than expected demand in India, and thus globally.

- China's current potash price stands at US\$470/t and domestic producers have been lowering prices. We don't think Sinofert will settle at a price that would result in a per tonne losses.
- Additionally, Indian demand may come in lower than expected on subsidy cut. India's Inter-Ministerial Committee has approved a proposal to reduce the subsidy on DAP and MOP; the consequent increase in retail prices may lead to demand destruction in our view.

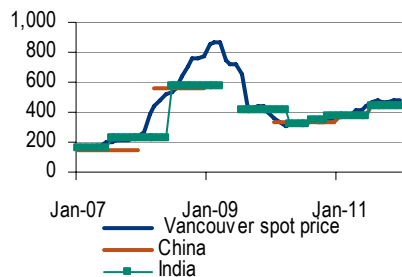
On the other hand, upside risk comes from coordinated production cuts by major producers: Potash Corp scheduled 14 weeks of maintenance shutdown, equivalent to 8% of its full-year output or 1.5% of global supply; Uralkali reduced its 2012 production target by 7%

Potash consumption growth losing momentum

We forecast China's potash consumption to remain flat at 10mn/t in 2012 as we believe (1) direct application of potash will stay low and (2) blenders are likely to reduce potassium (K) content in NPK fertilizers.

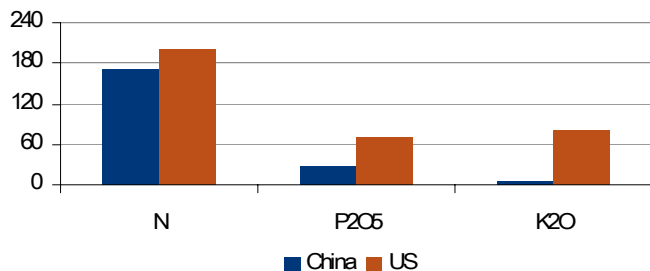
- Previously, we thought a reverse of potash under-application would drive domestic consumption growth as China only applies 6% of the amount of potash US applies on corn and 38% on soybean. However, with an average farm size at 0.6ha, it is not economical to test soil and without recognizing potash deficiency in soil, direct application of potash is likely to stay low.

Chart 37: Regional potash prices (US\$/t)



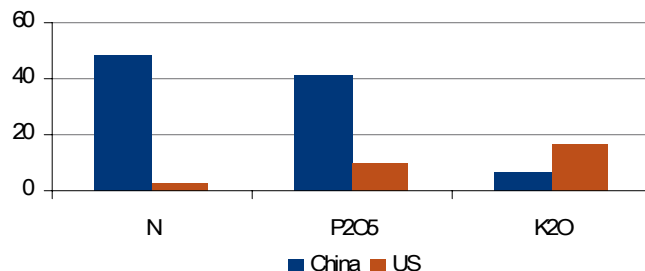
Source: BofA Merrill Lynch Global Research

Chart 38: Estimated application rate on corn (kg nutrient per ha)



Source: IFA, BofA Merrill Lynch Global Research
N=Nitrogen, P2O5=Phosphate and K2O=Potash

Chart 39: Estimated application rate on soybean (kg nutrient per ha)



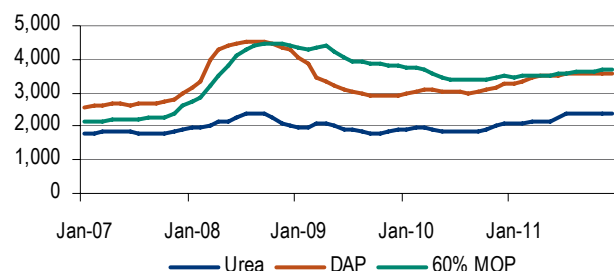
Source: IFA, BofA Merrill Lynch Global Research
N=Nitrogen, P2O5=Phosphate and K2O=Potash

- Prior to 2007, K was the least expensive of the three nutrients. Consequently there was little incentive for NPK blenders to reduce K content in the mix. Now it is the most expensive. Using current 15-15-15 NPK market prices, blenders are almost loss making on a per tonne basis. This leads me to

30 January 2012

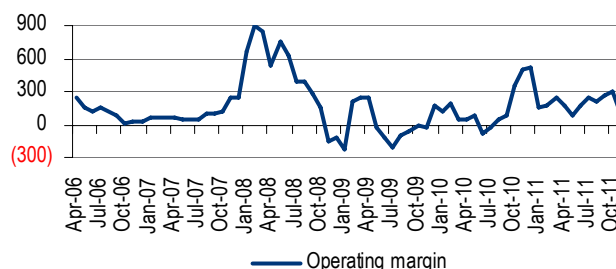
believe that blenders will reduce potassium content to maintain profitability. As NPK accounts for 60-70% of total potash applications, this will meaningfully impact demand and thus the domestic price of potash.

Chart 40: Price comparison of different fertilizers in China (RMB/t)



Source: CEIC

Chart 41: MOP-Urea-MAP compound operating margin (RMB/t)



Source: CEIC, BofA Merrill Lynch Global Research

Estimated inventory level of 4mn/t

We estimate China's 2011E year-end inventory to be around 4mn/t. The biggest swing factor in our forecast is 2011E consumption, which we expect to be 10mn/t. We maintain our view that China held 4mn/t of inventory at end-2010. The country has imported 5.5mn/t of potash in the first 10 months. We expect domestic production at about 4mn/t with Qinghai Salt Lake Potash achieving 2.4mn/t this year.

Table 4: Potash volume analysis (mn tonne)

	2005	2006	2007	2008	2009	2010	2011E	2012E
Inventory build								
Sinofer YE inventory +	1.6	1.4	1.9	2.0	1.0	0.7	0.7	0.5
Sinoagri YE inventory =	1.2	1.1	1.8	1.6	1.0	0.6	0.8	0.6
Imported inventory	2.8	2.5	3.8	3.6	2.0	1.3	1.5	1.0
QSLP YE inventory +	0.2	0.2	0.5	1.3	1.5	1.0	1.0	1.0
Other domestic inventory (Est.) =	0.2	0.1	0.2	0.5	1.1	1.7	1.5	1.5
Domestic inventory (Est.)	0.4	0.4	0.7	1.8	2.6	2.7	2.5	2.5
Total YE inventory	3.2	2.8	4.4	5.4	4.6	4.0	4.0	3.5
Total volume build								
Sinofer imported volume +	5.2	3.9	5.0	3.7	1.8	2.8	2.8	2.5
Sinoagri imported volume =	3.9	3.2	4.6	1.6	0.0	2.6	3.2	3.0
Total imported volume	9.0	7.1	9.6	5.3	1.8	5.4	6.0	5.5
QSLP production +	1.4	1.7	1.9	2.1	2.1	2.4	2.4	2.4
Other domestic production =	1.0	0.9	0.6	0.7	1.6	1.8	1.7	1.7
Total domestic production	2.4	2.7	2.5	2.8	3.7	4.1	4.0	4.0
Total volume available	11.4	9.8	12.1	8.1	5.5	9.5	10.0	9.5
Consumption build								
Change in inventory +	0.0	0.4	-1.6	-1.0	0.9	0.6	0.0	0.5
Total volume =	11.4	9.8	12.1	8.1	5.5	9.5	10.0	9.5
Domestic consumption	11.4	10.1	10.5	7.1	6.4	10.0	10.0	10.0
QSLP volume to Sinofer	0.5	0.7	0.7	0.3	0.6	0.0	0.5	1.5
Sinofer sales volume	5.7	4.6	5.7	4.0	2.4	2.8	3.3	4.0
Sinofer market share	50%	45%	54%	57%	37%	28%	33%	40%
Sinofer % of total import	57%	55%	52%	70%	100%	51%	46%	45%

Source: Company report, CEIC, BofA Merrill Lynch Global Research

30 January 2012

Table 5: China grain sowing and fertilizer application schedule

Spring corn

Area	Plating period	Mature days	Pre planting application	Young Plant application	Pre mature application
North China	Mid Apr - Early May.	Late Aug	Mar/Apr	Jun	Mid Jul
Northwest	Mid Apr - Early May.	Aug	Mar/Apr	Jun	Mid Jul
Huanghuai	Late May	Late Aug	Apr	Jun	Mid/late Jul
Southwest	Mar	Jun	Feb/Mar	Apr	May

Summer corn

Area	Plating period	Mature days	Pre planting application	Young Plant application	Pre mature application
Huanghuai	before Jun 30	Oct	Jun		Sep
South China	Jun	Sep	May		Aug
South China	Aug	Nov	Jul		Oct

Spring wheat

Area	Plating period	Mature days	Pre planting application	Additional application I	Additional application II
Northeast	Feb-Mar	Aug-Oct	Feb	Apr	Jun-Aug
Northwest	Feb-Mar	Aug-Oct	Feb	Apr	Jun-Aug

Winter wheat

Area	Plating period	Mature days	Pre planting application	Additional application I	Additional application II
Northwest	Mid Sep - Early Oct	Mid Jun - Early Jul	Aug	Mid Oct	Late Mar
North part of North China	Late Sep - Early Oct	Mid Jun - End Jun	Aug	Late Oct	Late Apr
South part of North China	Early/Mid Oct	Early/Mid Jun	Sep	Mid Nov	Apr
Huanghuai	Early/Mid Oct	Late May - Early Jun	Sep	Mid Nov	Apr
Jianghuai, Jiangnan	Late Oct - Early Nov	Mid/Late May	Sep	Late Nov	Late Feb - Late Mar
Jiangnan	Late Oct - Mid Nov	Early/Mid May	Sep	Late Nov	Late Feb - Mid Mar
Southwest	Early Nov	Early May	Oct	Early Dec	Late Jan

Rice

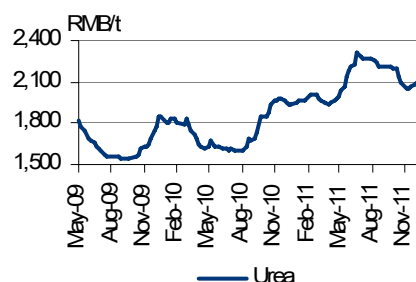
Area	Plating period	Mature days	Pre planting application	Additional application I	Additional application II
Northeast China	Mid/Late Apr	Early Sep - Early Oct	Mar	Late May	July
Northwest China	Apr	Oct	Mar	May	Aug
North China	Apr	Oct	Mar	May	Aug
Southwest	Late Mar	Oct	Mar	Late Apr	Aug
Yangzi River & South China	Apr	Jul	Mar	May	
Yangzi River & South China	Jul	Oct	Jun	Aug	

Soybean

Area	Plating period	Mature days	Pre planting application	Additional application
North China	Late Apr - Mid May	Mid Sep	Late Apr	Mid Aug
Mid China	Late Mar - Early Apr	Early Jul	Late Mar	Early Jun
South China	Feb - Mar	Jun- Jul	Feb	May
South China	Jun-Jul	Mid Sep	Jun	Mid Aug

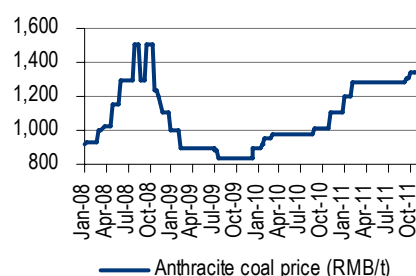
Source: MOA, JYW, JAAS, Farmer.com, Xjkunlun

Chart 42: Urea ex-factory price in China



Source: fert.cn

Chart 43: Anthracite coal price (RMB/t)



Source: BofA Merrill Lynch Global Research

Urea update and outlook

We forecast the average urea ex-factory price in 2012 to be RMB2100/t, slightly up 5% YoY, supported by rising cost of production. Export volume is likely to remain at a similar level to 2011, in our view. We expect to see above-average prices in winter due to power rationing to residential users and shortage of natural gas, a key raw material for gas-fed urea production.

Production cost to stay high, driven by raw material price

Given urea overcapacity in China, for most of 2012, we expect urea price close to the average cost of production of RMB1926/t for coal-based producers, accounting for 70% of China's urea capacity. We note a 5% increase in feedstock coal price would lead to a 3% increase in our production cost estimate. We expect the breakeven cost to remain flat compared to 2011 as lower coal price is offsetting the retail power tariff hike by an average RMB0.03/kwh, effective from Dec. 1, 2011. Thermal coal price is capped by the NDRC at RMB800/t.

Table 6: Break-even cost on coal-based urea production

Inputs	Units	Quantity	Unit cost	Total cost
Feedstock coal	Tonne	0.80	1,350	1,080
Steam coal	Tonne	0.30	800	240
Electricity	Kwh	1,100	0.36	400
Depreciation	RMB			70
Other cost	RMB			136
Total costs	RMB			1,926

Source: BofA Merrill Lynch Global Research

Table 7: Sensitive analysis to coal price

	-10%	-5%	Base	5%	10%
Feedstock coal price	1,215	1,283	1,350	1,418	1,485
Total costs	1,818	1,872	1,926	1,980	2,034
% chg from base	-6%	-3%	0%	3%	6%

BofA Merrill Lynch Global Research

2012 export tariff scheme: mild positive for producers

China's Taxation Committee announced the 2012 new fertilizer export tariff scheme on Dec. 9, 2011: although there are no changes to the low-tax period or the tax rate formula, it spells out that base prices will not include the export tariff, implying lower effective tax rates, all else being equal. At our projected 2012 urea FOB price of US\$394/t, we estimate that the effective tax rate will be 12.5% vs. 23.0% under the old scheme and, hence, the export netback to producers will be 10% higher (see Table 8).

China's fertilizer export tariff system imposes a punitive tax (110%) on urea exports during the domestic peak consumption season (Nov to Jul in the following year) and relatively lower but progressive tax rates during the domestic off-season (Jul to Oct) (see Chart 44).

30 January 2012

Table 8: Sensitivity analysis of netback to producers to urea FOB price

	2011 scheme: base price incl. 7% tax					2012 scheme: base price excl. 7% tax				
Urea price FOB (US\$/t)	354	374	394	414	434	354	374	394	414	434
Export tax rate (%)	13.6%	18.6%	23.0%	27.1%	30.8%	7.0%	9.8%	12.5%	15.1%	17.5%
Export tariff (US\$/t)	42	59	74	88	102	23	34	44	54	65
Export price excl. tax (US\$/t)	312	315	320	326	332	331	340	350	360	369
Transportation & port handling fees (US\$/t)	24	24	24	24	24	24	24	24	24	24
Netback to producers (US\$/t)	288	292	297	302	308	307	317	327	336	346
Current domestic ex-factory price (US\$/t)	331	331	331	331	331	331	331	331	331	331

Source: BofA Merrill Lynch Global Research

Chart 44: Fertilizer export tariff in 2012

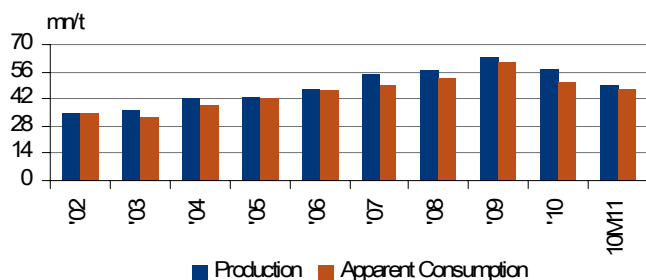


Source: China Taxation Committee

Export to remain low on unattractive netbacks

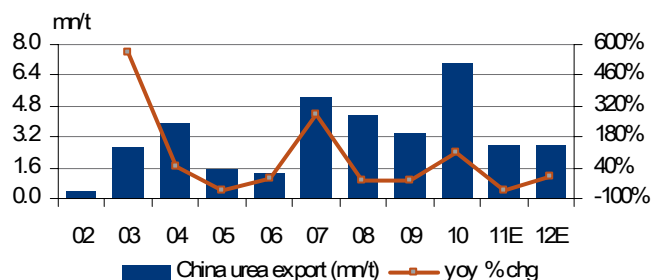
We forecast that China's 2012 urea export volume will remain low at 2.8mn/t, similar to 2011, as we estimate the 2012 export netback to be US\$327/t, though improved by a more favorable export tariff scheme, still at a slight discount to the domestic ex-factory price. Our export netback estimate is based on the 2012 China urea export FOB price of US\$394/t, down 13% YoY, inline with our global team's forecasts. Our global team projects a softening international urea price as deteriorating farmers' economics lead to below trend-line consumption.

Chart 45: China urea supply & demand



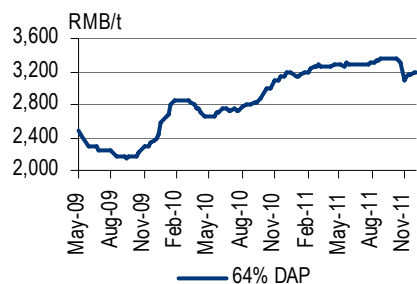
Source: CEIC, BofA Merrill Lynch Global Research

Chart 46: China urea export



Source: CEIC, BofA Merrill Lynch Global Research

Chart 47: DAP – Ex-factory price in China



Source: fert.cn

Phosphate update and outlook

We expect the diammonium phosphate (DAP) price to remain flat at the current level of RMB3200/t, or US\$492/t, through 2012, supported by elevated raw material cost. We expect phosphate fertilizer export volume to be similar to 2011 due to sustained weakness in the international market although China's 2012 export tariff is slightly more favorable to producers. We also forecast 2012 mono-ammonium phosphate (MAP) price of RMB2800/t, or US\$431/t.

Break-even cost of about RMB2700/t sets the price floor

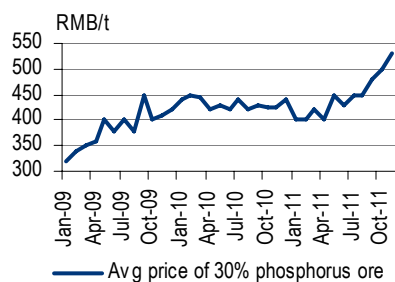
We estimate the break-even cost of about RMB2700/t will set the price floor for non-integrated DAP producers in China. However, given the high concentration of industry output, unlike urea, the average DAP selling price can be set relatively higher than the break-even cost.

Table 9: DAP – Breakeven cost analysis

	Unit required	Unit cost	Total cost
Rock	1.7	500	850
Sulphur	0.4	1,800	720
Ammonia	0.22	3,500	770
Other cost			305
Transportation to port			68
			2,713

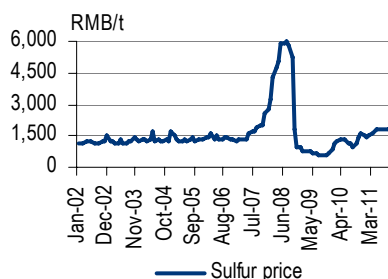
Source: BofA Merrill Lynch Global Research

Chart 48: Phosphorus ore price in China



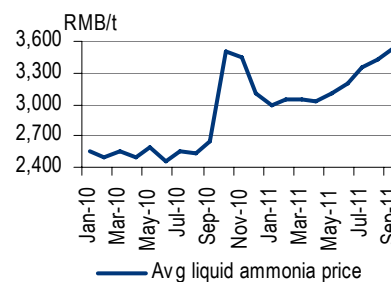
Source: CEIC

Chart 49: Sulfur price in China



Source: CEIC

Chart 50: Liquid ammonia price in China



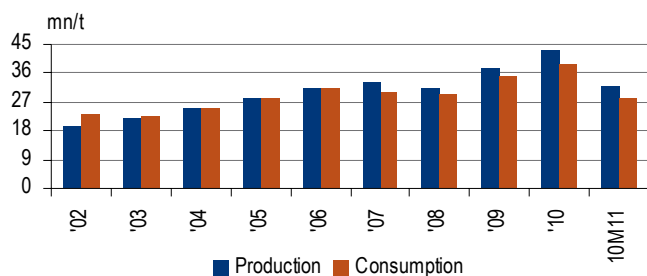
Source: CEIC

China's phosphate fertilizer export to remain subdued

We expect China's phosphate fertilizer export volume to be similar to 2011 due to sustained weakness in the international market as a result of increasing global supply from Saudi Arabia's Ma'aden project (3.0mn/t, 6% of global supply) and weak global demand due to deteriorating farmer economics. China exported 4.3mn/t of phosphate fertilizers in Jan-Oct 2011. As discussed previously in the urea outlook, China's 2012 export tariff is slightly more favorable to producers since the tariff will be effectively lowered by excluding tax from the base price, all else being equal.

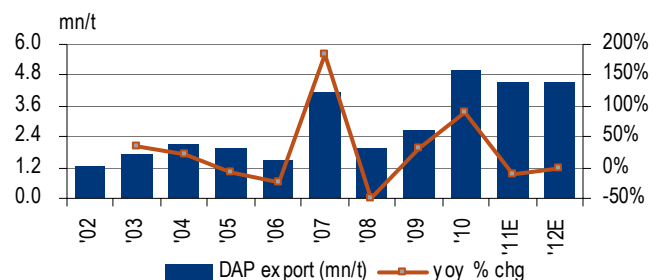
30 January 2012

Chart 51: China phosphate fertilizer supply & demand



Source: CEIC, BofA Merrill Lynch Global Research

Chart 52: China phosphate fertilizer export



Source: CEIC, BofA Merrill Lynch Global Research

DAP vs MAP: Use and industry structure

DAP is largely used for direct applications, and MAP is generally used for blending in compound fertilizer. International MAP and DAP prices are largely the same; however, in China, DAP prices are at a premium to MAP: current MAP and DAP prices are RMB2750/t and RMB3200/t, respectively. The industry structure accounts for this difference – DAP output is more concentrated with the top ten producers accounting for 78% industry output in 2010, whereas the top 10 MAP producers accounted for c.60%.

Technological barriers are the key reason that DAP production is more concentrated than MAP. China's phosphate rock is of a much lower quality (as measured by phosphoric acid content) than international rock. It is much more difficult to produce DAP from low phosphoric acid-content rock compared to MAP.

Table 10: 2010 DAP production volume (k/t)

	2009	% of total	2010	% of total
Yuntianhua Group	1,973	19%	2,512	21%
Guizhou Kailin	1,089	10%	1,654	14%
Guizhou Wengfu	1,116	11%	1,189	10%
Hubei Yihua	656	6%	701	6%
Anhui Liuguo	613	6%	618	5%
Three Circle SinoChem	504	5%	603	5%
Three Circle Cargill	597	6%	591	5%
Guandong Zhanhua	384	4%	407	3%
Hubei Dayukou	401	4%	403	3%
Yunnan Xiangfeng	417	4%	400	3%
Subtotal	7,750	74%	9,078	78%
Total	10,454		11,711	

Source: China National Chemical Information Center

Exhibit 1: Location of phosphate resources



Source: China BlueChem

Source: China BlueChem

Industry consolidation

Compared to the nitrogenous fertilizer, China's phosphate fertilizer output is much more consolidated. The share of top ten DAP producers have risen from about 50% in 2005 to 78% in 2010 and the share of top ten MAP producers from less than one-third to about 60%. Industry consolidation has been driven by relocation of production from the point of sale (Northeast and Southern China) to the location of phosphate resources (Yunnan, Sichuan, Hubei and Guizhou).

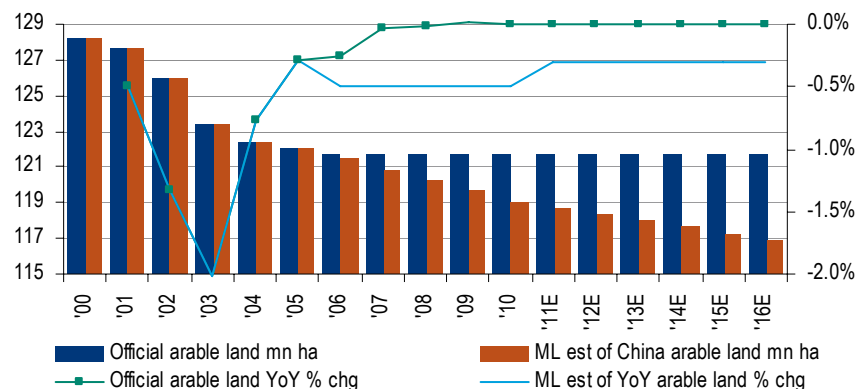
Arable land analysis

We don't expect to see significant productivity gains due to lack of farm consolidation and absence of Genetically Modified technology in China. This, combined with falling arable land will limit domestic grain production, in our view, and thus upside to grain imports likely.

Arable land may already be below the "red line"

The Chinese government defines the "red line" for arable land, 120mn ha, as the critical level to ensure grain self-sufficiency. We estimate arable land has already fallen below this level, and will decrease to 117mn ha by 2016. We have analyzed time-series satellite imagery for China's 50 largest cities by population, and estimate a 2.3% CAGR in city coverage area over the past five years. While official government figures leave arable land flat at 122mn ha since 2005, we believe urban sprawl, desertification and illegal commercial conversion has lead to an 0.5% CAGR decline in arable from 2004-10 and forecast a 0.3% decline until 2016.

Chart 53: Arable land in China: Official versus BofAML estimates



Source: Ministry of Land and Resources, BofA Merrill Lynch Global Research

Illegal land-use conversion leads to loss of arable land

While the government is strictly controlling the conversion of arable land for commercial purposes, we believe arable land continues to be converted through legal loopholes or in outright defiance of central government policy, evidenced by the mounting illegal land-use cases reported recently. According to Ministry of Land Resources (MoLR), illegal land-use cases involved 48,900ha of land, including 18,300ha of arable land in 2010. In the first quarter this year, MoLR reported a total of 9,832 illegal land-use cases, up 3.7% YoY.

2011 planting intention: Soybean acreage down 11.2% YoY

We have updated our MY10/11E estimates based on a survey conducted by Ministry of Agriculture (MoA) in Feb. this year on planting intentions: corn acreage +2.1%, soybean -11.2%, rice +1.9%, wheat flat, cotton +5.4%, sugar -0.3%, and vegetable +1.9% YoY. The biggest surprise comes from soybean: with the significant decline in planted area, we estimate that soybean output in China will be only 13.0mn t in MY10/11E, down 10% YoY. MY represents marketing year which runs from Oct. to Sep. in China.

Table 11: Grain forecast assumptions

	Planted area	Yield	Consumption
Corn	-0.3%	1.7%	3.9%
Rice	-0.3%	0.0%	0.0%
Wheat	-0.3%	0.0%	0.8%
Soybean	-0.3%	0.3%	8.2%

Source: BofA Merrill Lynch Global Research

Upside to grain imports likely

For our MY10/11E base, we believe China could import 52mn t of soybean and 0.9mn t of corn. We forecast imports of soy and corn to increase by 10% and 76% pa, respectively, to MY16/17E. For the forecast years (MY10/11-16/17E), we assume the following for each grain: (1) consumption grows at the five-year historical CAGR; (2) yield improvement will be in line with historical trends; and (3) arable land allocated to grain will decline at 0.6% CAGR as cash crops are more profitable than field crops.

Table 12: China's grain net import forecasts (mn tons)

	Corn	Wheat	Soybean	Rice
06/07	-5.3	-2.4	28.3	-0.9
07/08	-0.5	-2.8	37.4	-0.7
08/09	-0.1	-0.2	40.7	-0.4
09/10	1.2	0.5	50.1	-0.3
10/11E	0.9	0.0	51.9	0.0
11/12E	3.5	0.0	57.8	2.3
12/13E	7.7	1.3	63.6	2.8
13/14E	12.1	2.5	70.0	3.2
14/15E	16.6	3.8	76.8	3.6
15/16E	21.5	5.1	84.2	4.0
16/17E	26.6	6.3	92.3	4.4

Source: USDA, BofA Merrill Lynch Global Research

Stock-to-use ratio likely overstated

We apply historical yield and planted area to our revised arable land assumption, and conclude that the corn stock-to-use ratio is only 22% in MY10/11E. Our lower estimate of grain inventories relative to production has direct implications for grain imports, especially since the USDA's estimate of 30% is well above the 10-year world average of 23%, and would imply a comfortable inventory cushion that China could draw down before becoming a large importer.

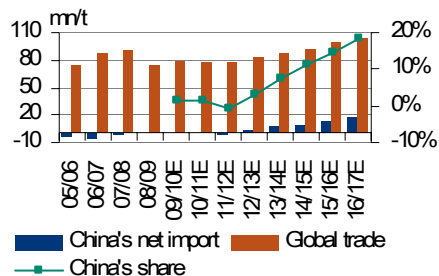
Why the potential overstatement in reserves/production?

The USDA points out that overstatement of grain production "may be attributed to a central government subsidy program that is based on grain production in each individual producing province. To gain more allocation of financial aid from the central government, provincial authorities are occasionally tempted to overstate their grain output in a given year even if the crop was impacted by adverse weather". For example, in MY09/10E, the USDA estimates that China's corn output was 158mn/t, whereas official estimates stand at 164mn/t.

What about productivity gains?

We do not believe that adoption of Genetically Modified Organisms (GMO) will drive near-term productivity gains as (1) GMO roll-out is in its infancy with an emphasis on domestically developed technology;(2) even if GMO was rolled out today, it would likely take at least 10 years to hit 50% penetration. For example, China introduced hybrid rice in 1976 but did not hit 50% market penetration until 1989. US launched GMO in 1996 and did not hit 50% penetration until 2005.

Chart 54: China's share in world trade of corn



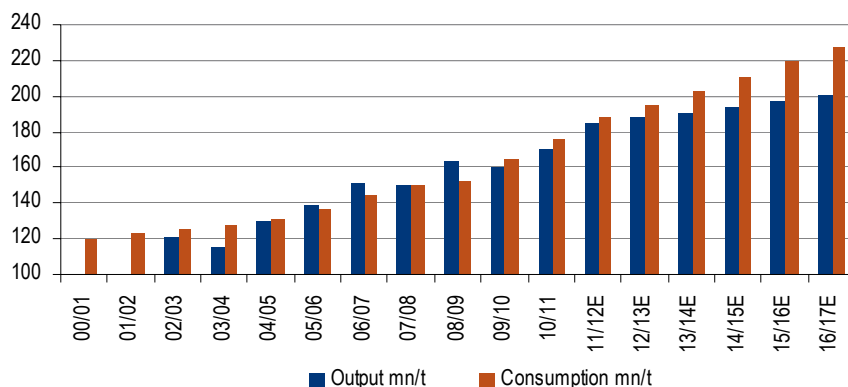
Source: FAPRI, BofA Merrill Lynch Global Research

Corn supply/demand analysis

Under our base case, we estimate corn imports to grow from 0.9mn/t in MY10/11E to 26.6mn/t in MY16/17E (assuming reserve levels remain constant). Our estimate is based on: (1) a 2.0% yield CAGR driven by more balanced fertilizer application but with minimal benefits from biotechnology, (2) a 0.3% decline pa in planted area, in line with the decline in total arable land, and (3) a 4.0% CAGR for consumption, driven by increasing meat consumption, and thus stronger feed demand, along with rising per capita disposable income.

The annual corn import quota has been 7.2mn t for the past five years, with 60% allocated to state-owned enterprises and the balance to private processors. The quota has never been fully utilized, partly due to the lengthy and complicated application process for permits to import genetically modified (GM) corn.

Chart 55: China corn supply vs. demand



Source: USDA, NBS, BofA Merrill Lynch Global Research

Bull/bear case analysis

For our bull case, we leave all assumptions the same as our base case with the exception of arable land: we use the official data for historical years and leave arable land flat in forecast years. For the bull case, we only expect 17.8mn/t in imports in MY16/17E. Under our bear case, we again use the same assumptions; however, we assume a 1.1% pa decline in arable land during 2005-10 (the five-year CAGR from 2000-05) and a 0.5% pa decline until 2015. For the bear case, we expect 35.2mn/t in MY16/17E.

Table 13: Base case for corn supply/demand analysis

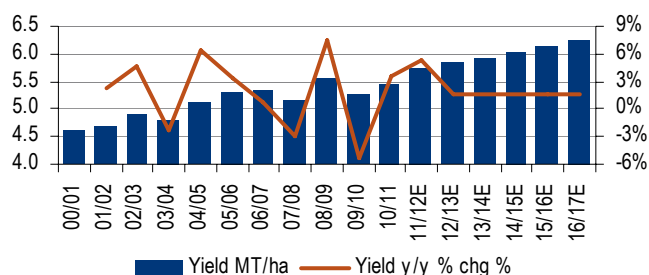
	Arable land mn ha	YoY % chg %	Total acreage mn ha	Cropping multiple x	% sown area %	Corn acreage mn ha	Yield MT/ha	Output mn/t	Consump mn/t	Net import mn/t	Ending stock mn/t	Stock-to- use ratio %
06/07	121	-0.5%	151	1.25	18.71%	28.3	5.33	151	145	-5.3	36.0	25%
07/08	121	-0.5%	152	1.26	19.21%	29.2	5.17	151	150	-0.5	36.4	24%
08/09	120	-0.5%	154	1.28	19.11%	29.4	5.56	164	153	-0.1	46.9	31%
09/10	119	-0.5%	156	1.30	19.66%	30.6	5.26	161	165	1.2	43.9	27%
10/11	119	-0.5%	155	1.30	20.23%	31.3	5.45	171	176	0.9	39.4	22%
11/12E	118	-0.3%	154	1.30	20.87%	32.2	5.74	185	188	3.5	39.4	21%
12/13E	118	-0.3%	154	1.30	20.86%	32.1	5.86	188	196	7.7	39.4	20%
13/14E	118	-0.3%	153	1.30	20.86%	32.0	5.98	191	203	12.1	39.4	19%
14/15E	117	-0.3%	153	1.30	20.86%	31.9	6.10	194	211	16.6	39.4	19%
15/16E	117	-0.3%	152	1.30	20.86%	31.8	6.22	198	219	21.5	39.4	18%
16/17E	117	-0.3%	152	1.30	20.86%	31.7	6.35	201	228	26.6	39.4	17%

Source: USDA, CEIC, BofA Merrill Lynch Global Research

Corn yield CAGR at 2.0% to 2016/17E

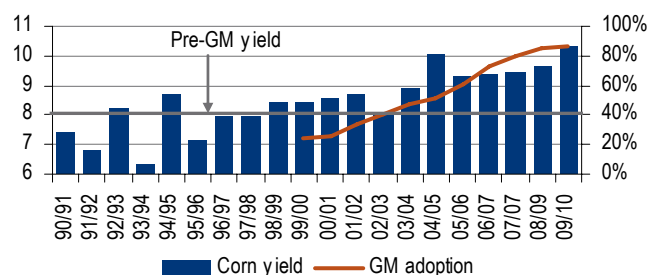
We forecast that corn yield in China will recover to the normalized level of 5.4MT/ha in MY10/11E and increase at 2.0% CAGR till 2016/17E, driven by the use of higher-yield seeds and more balanced fertilizer application. In MY09/10E, the yield was adversely impacted by the drought in North-East China. Given the wide adoption of GM corn for commercial use is not expected in China in the next five years, we expect corn yield will be capped at c.6.0mt/ha. The pre-GM adoption corn yield in the US was about 8.0MT/ha in 1996/97 and it took eight years for the GM adoption rate to rise above 50%.

Chart 56: Corn yield in China



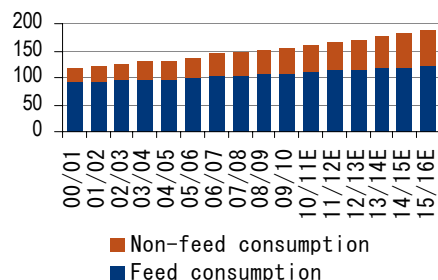
Source: USDA, CEIC, BofA Merrill Lynch Global Research

Chart 57: GM adoption and corn yield in the US



Source: USDA, BofA Merrill Lynch Global Research

Chart 58: Corn consumption breakdown (mn/t)

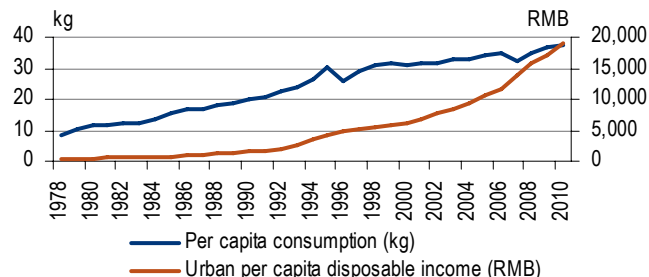


Source: USDA

Consumption growth driven by strong feed demand

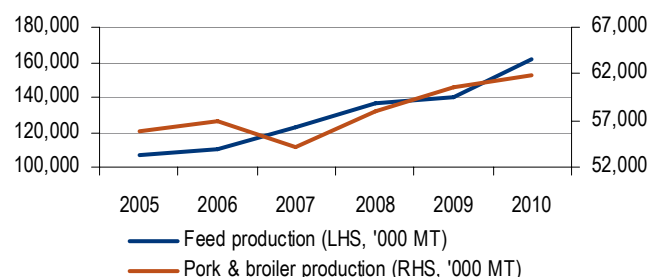
Around 70% of corn in China is consumed in feed production with the balance going for industrial use, including the production of starch sweetener, industrial and food starch and ethanol. We forecast corn consumption to grow at about 4% p.a. till MY16/17E, driven by increasing meat consumption, and thus stronger demand for feed, along with rising per capita disposal income. Per capita meat consumption in mainland China is still well below that in Hong Kong and Taiwan, where dietary habits are similar, indicating a large potential for China's protein consumption growth.

Chart 59: Rising disposable income to drive meat consumption



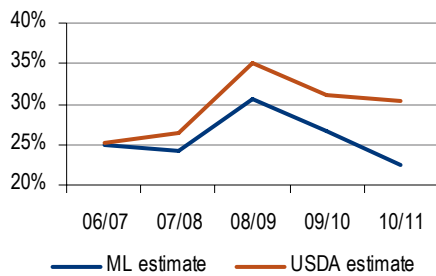
Source: USDA, CEIC

Chart 60: Feed production roughly in line with pork / poultry output



Source: FAPRI, China Feed Industry Association

Chart 61: Corn stock-to-use ratio in China



Source: USDA, BofA Merrill Lynch Global Research

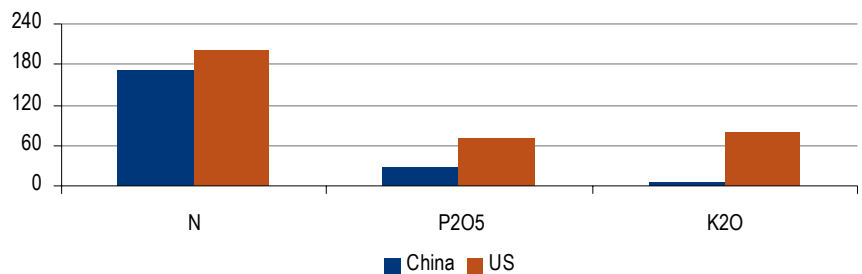
Stock-to-use ratio

The Chinese government does not disclose its corn reserves. We estimate that the corn stock-to-use ratio stands at 22% in MY10/11E. Our estimate is lower than the USDA estimate as we believe USDA did not factor in the actual decline in arable land. Imports may be lower than expected if the government is willing to draw down its reserves, which stand above the ten-year world average of 23%.

More balanced application needed to boost corn yield

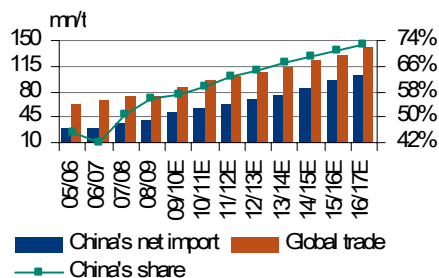
Chinese farmers are applying only 38% of the phosphorus and 6% of the potassium that the US is applying on corn. Given the arable land constraints, we believe a more balanced application is essential to boost corn yield in order to raise output, which should bode well for chemical fertilizer demand.

Chart 62: Estimated application rate on corn (kg nutrient per ha)



Source: IFA, BofA Merrill Lynch Global Research
N=Nitrogen, P2O5=Phosphate and K2O=Potash

Chart 63: China's share in world soybean trade

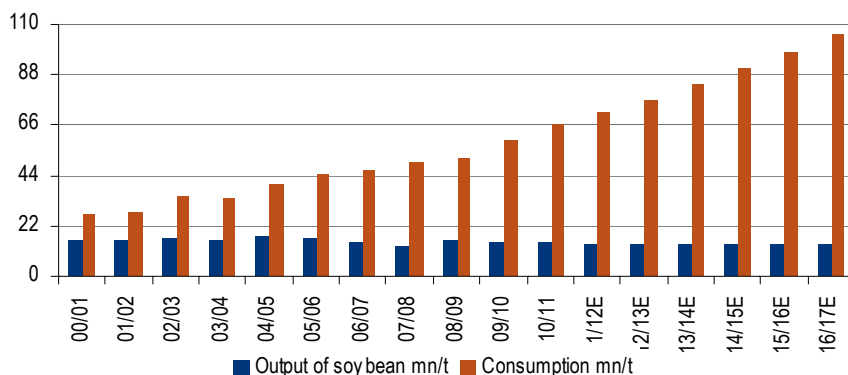


Source: FAPRI, BofA Merrill Lynch Global Research

Soybean supply/demand analysis

Under our base case, we estimate that soybean imports will grow from 51.9mn/t in MY10/11E to 92.3mn/t in MY16/17E (assuming reserve levels remain constant). Our estimate is based on: (1) a trend-line yield CAGR of 0.3%, likely driven by more balanced fertilizer application, (2) a 0.3% decline pa in planted area, in line with the decline in total arable land, and (3) a trend-line consumption CAGR of 8.2%, driven by the rapid growth of feed consumption in animal husbandry and rising demand for edible oil.

Chart 64: China soybean supply vs. demand



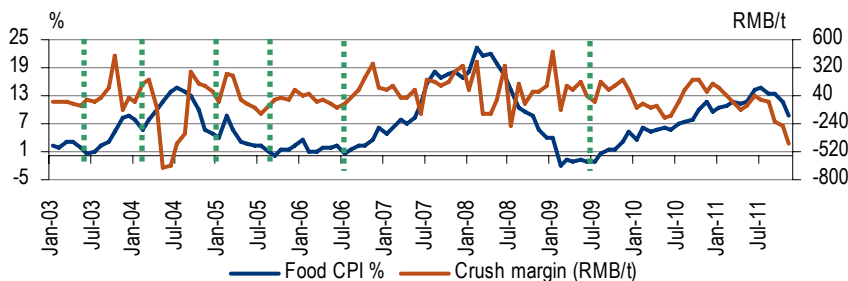
Source: USDA, NBS, BofA Merrill Lynch Global Research

Crush margin: The key driver for soybean demand

Around 80% of soybean in China is crushed to produce soybean oil, a major type of vegetable oil consumed in China, and soy meal, a key input to produce industrial feed. Therefore, soybean demand is determined by crushing margin, a result of the dynamics among soybean, soy oil and soy meal pricing.

We note that historically the crush margin picked up when food inflation bottomed out (indicated by the vertical line in Chart 65); however the up-cycle lasted roughly four months on average before reaching the inflection point – consistent with the length of the production cycle (ordering and shipping soybean from overseas and crushing).

Chart 65: Crush margin versus food inflation in China

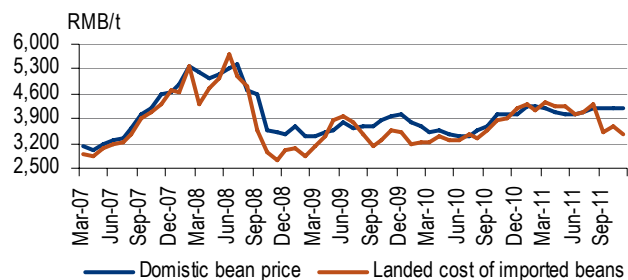


Source: Bloomberg, BofA Merrill Lynch Global Research

Widening price gap: Further upside for imports

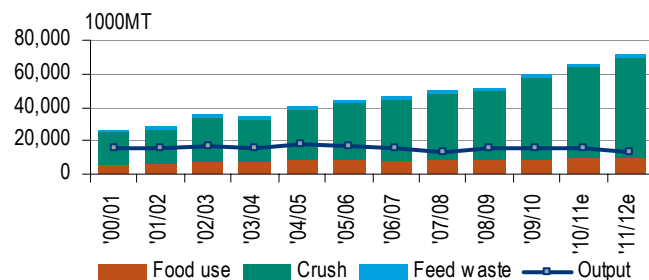
Although the domestic soybean price broadly tracks the landed cost of imported soybean, in a declining market, the downside to domestic soybean price is relatively limited because the demand for domestic soybean as direct food consumption is non-substitutable by imported soybean, which is all genetically modified. Given the anticipated output decline in MY11/12E, USDA forecasts direct food consumption will account for 68% of total domestic output. Supported by rising planting cost in China, the domestic soybean price is likely to stay firm and further delink from the international price – and the widening gap may cause imports to surprise to the upside.

Chart 66: Domestic bean price vs. landed cost of imported beans



Source: Bloomberg, BofA Merrill Lynch Global Research

Chart 67: Soybean consumption breakdown vs. output in China



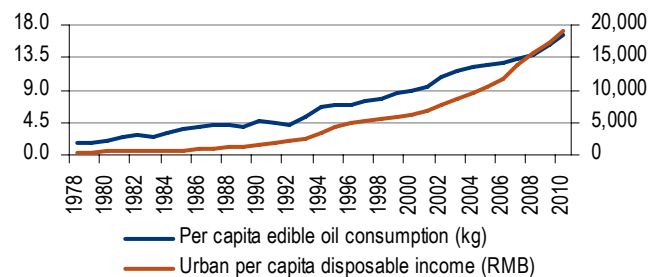
Source: USDA, BofA Merrill Lynch Global Research

Rising income and protein consumption: LT positive for soy

We forecast soybean consumption CAGR at 8.4% till MY16/17E, driven amid the rising demand for edible oil and the rapid growth of feed consumption in animal husbandry and aquaculture sectors. The output of animal protein (including meats, poultry eggs and aquatic products) recorded 6% CAGR in the past 20 years and shows a strong correlation with soybean meal demand.

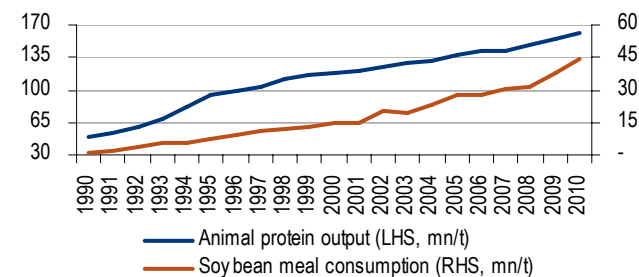
Soybean oil accounts for 52% of total vegetable oils, followed by rapeseed oil at 28%, peanut oil 11%, cottonseed oil 7% and sunflower oil at 2%.

Chart 68: Rising disposable income to drive vegetable oil consumption



Source: USDA, CEIC, BofA Merrill Lynch Global Research

Chart 69: Increasing demand for animal protein to drive soybean meal consumption



Source: CEIC, USDA, BofA Merrill Lynch Global Research

Note: Animal protein output includes meats, poultry eggs and aquatic products.

Bull/bear case analysis on arable land

For our bull case, we leave all assumptions the same as our base case with the exception of arable land: we use the official data for historical years and leave arable land flat in forecast years. In this case, we expect imports of 91.7mn/t in MY16/17E. In our bear case, we again use the same assumptions except for assuming a 1.1% pa decline in arable land in 2005-10 (five-year CAGR from 2000-05) and a 0.5% pa decline until 2015. For the bear case we expect imports of 92.9mn/t in 2015.

Table 14: Base case for soybean supply/demand analysis

	Arable land mn ha	YoY % chg %	Total acreage mn ha	Cropping multiple x	% sown area %	Corn acreage mn ha	Yield MT/ha	Output mn/t	Consump mn/t	Net import mn/t	Ending stock mn/t	Stock-to- use ratio %
06/07	121	-0.5%	151	1.25	6.14%	9.3	1.62	15	46	28.3	1.8	4%
07/08	121	-0.5%	152	1.26	5.76%	8.8	1.53	13	50	37.4	2.8	6%
08/09	120	-0.5%	154	1.28	5.93%	9.1	1.70	16	51	40.7	7.6	15%
09/10	119	-0.5%	156	1.30	5.91%	9.2	1.63	15	59	50.1	13.2	22%
10/11	119	-0.5%	155	1.30	5.51%	8.5	1.77	15	66	51.9	14.2	22%
11/12E	118	-0.3%	154	1.30	4.96%	7.7	1.78	14	71	57.8	14.2	20%
12/13E	118	-0.3%	154	1.30	4.96%	7.6	1.78	14	77	63.6	14.2	18%
13/14E	118	-0.3%	153	1.30	4.96%	7.6	1.79	14	84	70.0	14.2	17%
14/15E	117	-0.3%	153	1.30	4.96%	7.6	1.80	14	90	76.8	14.2	16%
15/16E	117	-0.3%	152	1.30	4.96%	7.6	1.80	14	98	84.2	14.2	15%
16/17E	117	-0.3%	152	1.30	4.96%	7.5	1.81	14	106	92.3	14.2	13%

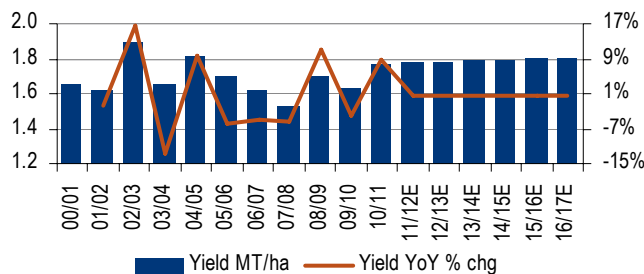
Source: USDA, CEIC, BofA Merrill Lynch Global Research

Soybean yield CAGR at 0.3% till 2016/17E

We forecast that the soybean yield in China will recover to a normalized level of 1.8MT/ha in MY10/11E and increase at a 0.3% CAGR to 2016/17E. In MY09/10, yield was affected by drought during the sowing season and excessive rain during the growing cycle in Heilongjiang Province. Soy yield CAGR was 0.3% in 2000- 09, driven by the use of higher yield seeds and more balanced fertilizer application.

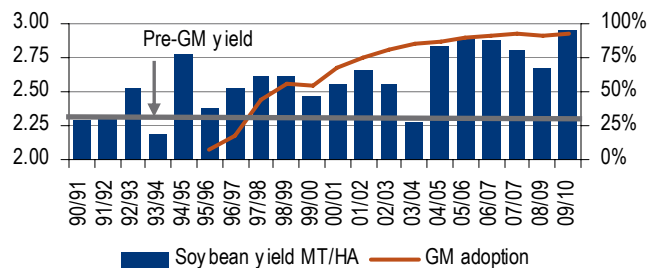
The pre-GM adoption soybean yield in the US is about 2.3MT/ha, which sets a theoretical cap on soybean yield in China, given that GM adoption is not expected in the next five years. We do not expect China's soybean yield to achieve this level due to inferior soil quality and imbalanced fertilizer application. The government's current customized fertilizer application target only accounts for about 10% of total application.

Chart 70: Soybean yield in China



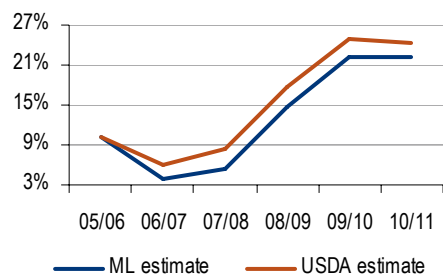
Source: USDA, BofA Merrill Lynch Global Research

Chart 71: GM adoption and soybean yield in the US



Source: USDA, BofA Merrill Lynch Global Research

Chart 72: Soybean stock-to-use ratio in China

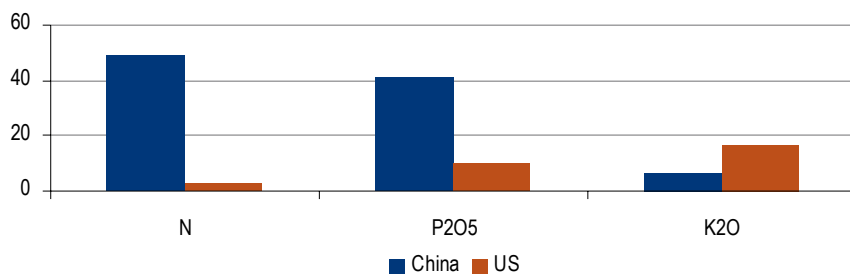


Source: USDA, BofA Merrill Lynch Global Research

Stock-to-use ratio

The Chinese government does not disclose its soybean reserves. We estimate that the stock-to-use ratio for soybean will stand at around 21% in MY10/11E vs. the USDA's estimate of 24%. We believe the USDA estimate has not factored in the actual decline in arable land.

Chart 73: Estimated application rate on soybeans (kg nutrient per ha)

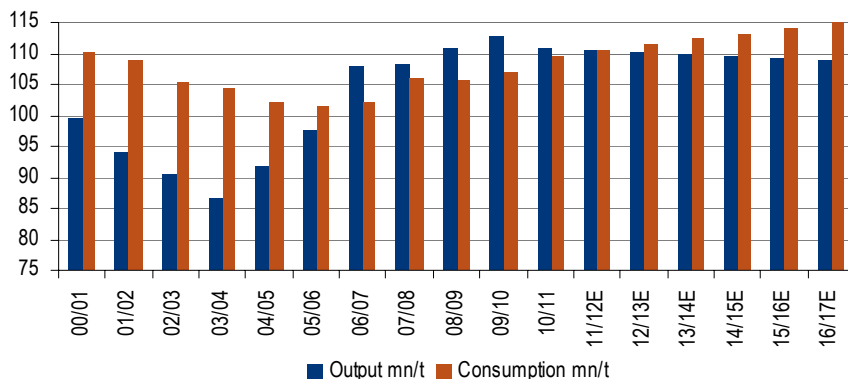


Source: IFA, BofA Merrill Lynch Global Research
N=Nitrogen, P205=Phosphate and K2O=Potash

Wheat supply/demand analysis

Under our base case, we believe wheat supply and demand is balanced with little need to import a significant amount of wheat until MY12/13E. We expect 6.3mn/t of imports or 6% of annual consumption in MY16/17E. Our estimate is based on: (1) flat yield over the next five years as over-application of fertilizers limits yield upside, (2) a 0.3% decline pa in planted area, in line with the decline of total arable land, and (3) a 0.8% CAGR for consumption, in line with historical growth.

Chart 74: China wheat supply vs. demand



Source: USDA, NBS, BofA Merrill Lynch Global Research

Bull/bear case analysis

Under our bull case, we leave all assumptions the same as our base case with the exception of arable land, for which we use the official data for historical years and leave it flat in forecast years. In this case, we expect China to import only 1.6mn/t in MY16/17E. Under our bear case, we again use the same assumptions, except for assuming a 1.1% pa decline in arable land in 2005-10 (the five-year CAGR from 2000-05) and a 0.5% pa decline until 2015. In this case, we would expect China to import 11.0mn/t in MY16/17E.

Table 15: Base case of wheat supply/demand analysis

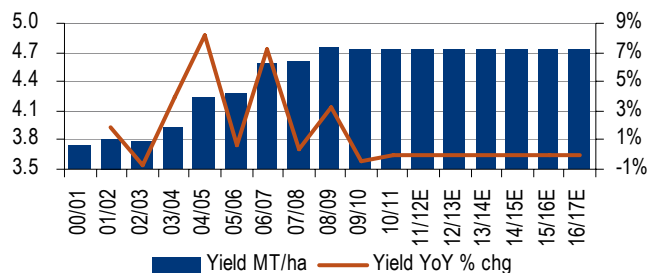
	Arable land mn ha	YoY % chg %	Total acreage mn ha	Cropping multiple x	% sown area %	Corn acreage mn ha	Yield MT/ha	Output mn/t	Consump mn/t	Net import mn/t	Ending stock mn/t	Stock-to- use ratio %
06/07	121	-0.5%	151	1.25	15.52%	23.5	4.59	108	102	-2.4	37.9	37%
07/08	121	-0.5%	152	1.26	15.46%	23.5	4.61	108	106	-2.8	37.5	35%
08/09	120	-0.5%	154	1.28	15.11%	23.3	4.76	111	106	-0.2	42.5	40%
09/10	119	-0.5%	156	1.30	15.31%	23.8	4.74	113	107	0.5	48.9	46%
10/11	119	-0.5%	155	1.30	15.10%	23.4	4.74	111	110	0.0	50.1	46%
11/12E	118	-0.3%	154	1.30	15.10%	23.3	4.74	110	110	0.0	50.1	45%
12/13E	118	-0.3%	154	1.30	15.10%	23.2	4.74	110	111	1.3	50.1	45%
13/14E	118	-0.3%	153	1.30	15.10%	23.1	4.74	110	112	2.5	50.1	45%
14/15E	117	-0.3%	153	1.30	15.10%	23.1	4.74	109	113	3.8	50.1	44%
15/16E	117	-0.3%	152	1.30	15.10%	23.0	4.74	109	114	5.1	50.1	44%
16/17E	117	-0.3%	152	1.30	15.10%	22.9	4.74	109	115	6.3	50.1	44%

Source: USDA, CEIC, BofA Merrill Lynch Global Research

Wheat yield 59% higher than in the US

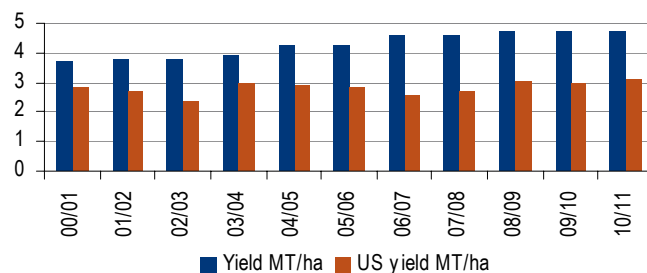
We forecast that the wheat yield in China will stay flat over the next five years due to limited growth potential. The USDA has reported that Chinese farmers tend to use more fertilizer than needed to boost yield while overlooking quality improvement as the government's minimum price purchase scheme offers no price premium on quality wheat. The wheat yield is 59% higher in China than in the US. The USDA also commented that as a result of over-application of fertilizers, the gluten level often exceeds the mill requirement in China.

Chart 75: Wheat yield in China



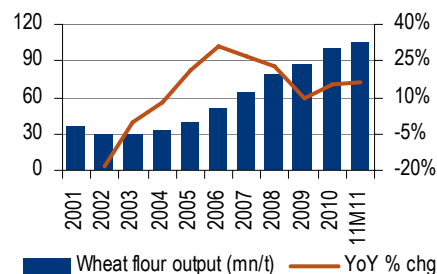
Source: USDA, BofA Merrill Lynch Global Research

Chart 76: Wheat yield: China vs. US



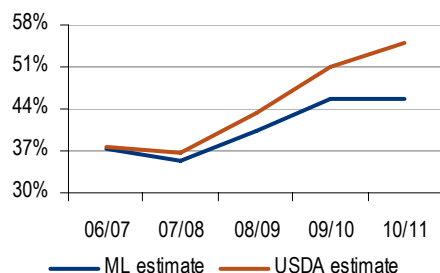
Source: USDA, NBS, BofA Merrill Lynch Global Research

Chart 77: Wheat flour output in China



Source: Bloomberg

Chart 78: Wheat stock-to-use ratio in China



Source: USDA, BofA Merrill Lynch Global Research

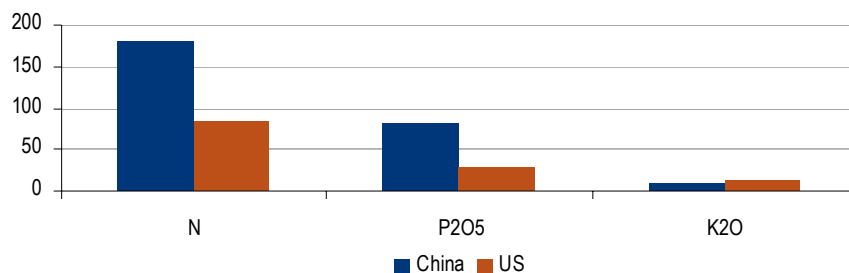
Consumption driven by rising high-quality flour demand

In China, roughly 85% of wheat is used to produce flour with the remainder used in animal feed products, seeding or industrial consumption. We forecast a 0.8% CAGR for consumption till MY16/17E, in line with historical growth. Although consumer demand for traditional wheat products including steamed buns and noodles has declined, the rising preference for bakery products and convenience foods should drive the demand for higher quality flour products.

Stock-to-use ratio

The Chinese government does not disclose its wheat reserves. We estimate that the wheat stock-to-use ratio will stand at about 46% in MY10/11E. Our estimates are lower than the USDA estimates as we believe the USDA has not factored in the actual decline in arable land.

Chart 79: Estimated application rate on wheat (kg nutrient per ha)

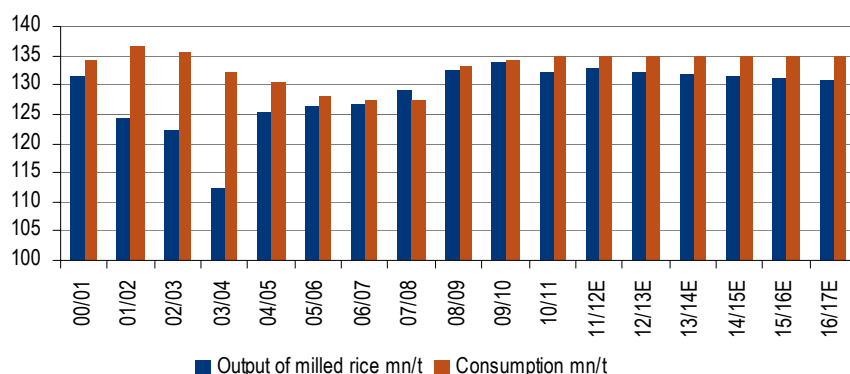


Source: IFA, BofA Merrill Lynch Global Research
N=Nitrogen, P2O5=Phosphate and K2O=Potash

Rice supply/demand analysis

Under our base case, we believe that China will start to import rice in MY11/12E, growing from 2.3mn/t to 4.4mn/t in MY16/17E (assuming the reserves remain constant). Our estimate is based on: (1) flat yield over the next five years, (2) a 0.3% decline pa in planted area, in line with the decline of total arable land and (3) stable consumption due to a combination of the shifting preference of residents in North China to consume more rice than wheaten food and other consumers replacing carbohydrates with protein as the income level rises.

Chart 80: China rice supply vs. demand



Source: USDA, NBS, BofA Merrill Lynch Global Research

Bull/bear case analysis

Under our bull case, we leave all assumptions the same as our base case with the exception of arable land, for which we use the official data for historical years and leave it flat in forecast years. In this case, we do not expect any import needs. Under our bear case, we again use the same assumptions except for assuming a 1.1% pa decline in arable land in 2005-10 (the five-year CAGR from 2000-05) and a 0.5% pa decline until 2015. In this case, we would expect China to import 10.4mn/t of rice in MY16/17E.

Table 16: Base case of rice supply/demand analysis

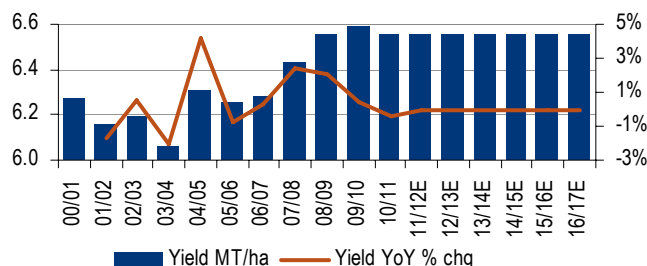
	Arable land mn ha	YoY % chg %	Total acreage mn ha	Cropping multiple x	% sown area %	Corn acreage mn ha	Yield MT/ha	Output mn/t	Consump mn/t	Net import mn/t	Ending stock mn/t	Stock-to- use ratio %
06/07	121	-0.5%	151	1.25	19.02%	28.8	6.28	127	127	-0.9	35.3	28%
07/08	121	-0.5%	152	1.26	18.84%	28.6	6.43	129	127	-0.7	36.1	28%
08/09	120	-0.5%	154	1.28	18.71%	28.8	6.56	132	133	-0.4	35.0	26%
09/10	119	-0.5%	156	1.30	18.68%	29.0	6.59	134	134	-0.3	34.4	26%
10/11	119	-0.5%	155	1.30	18.59%	28.8	6.56	132	135	0.0	31.6	23%
11/12E	118	-0.3%	154	1.30	18.73%	28.9	6.56	133	135	2.3	31.6	23%
12/13E	118	-0.3%	154	1.30	18.72%	28.8	6.56	132	135	2.8	31.6	23%
13/14E	118	-0.3%	153	1.30	18.72%	28.7	6.56	132	135	3.2	31.6	23%
14/15E	117	-0.3%	153	1.30	18.72%	28.6	6.56	131	135	3.6	31.6	23%
15/16E	117	-0.3%	152	1.30	18.72%	28.5	6.56	131	135	4.0	31.6	23%
16/17E	117	-0.3%	152	1.30	18.72%	28.4	6.56	131	135	4.4	31.6	23%

Source: USDA, CEIC, BofA Merrill Lynch Global Research

Rice yield to remain flat to 2015

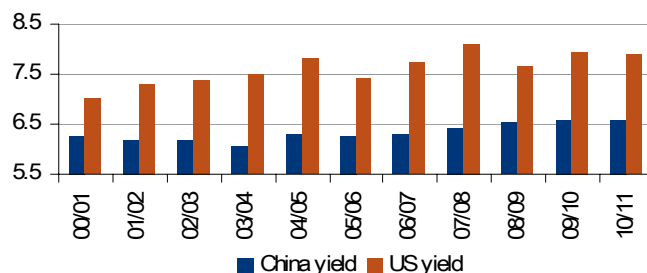
We estimate that rice yield in China will remain flat at around 6.6MT/ha for the next five years, as the adoption rate of hybrid rice has stabilized at approximately 55% since early the 1990s after rapid adoption growth prior to 1990.

Chart 81: Rice yield in China



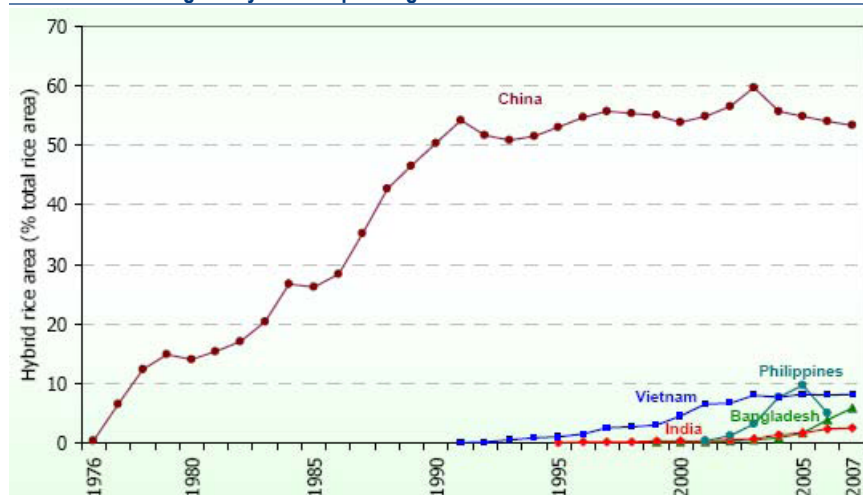
Source: USDA, BofA Merrill Lynch Global Research

Chart 82: Rice yield comparison: China vs US (MT/ha)



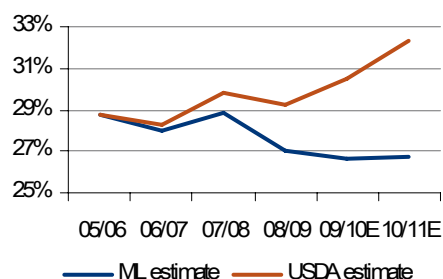
Source: USDA

Chart 83: Percentage of hybrid rice planting area in Asian countries



Source: IIRI

Chart 84: Rice stock-to-use ratio in China



Source: USDA, BofA Merrill Lynch Global Research

Rice consumption to stay flat

We forecast rice consumption to stay flat till MY16/17E as residents in northern China have been gradually changing food consumption patterns to eat more rice than wheaten food while other consumers tend to replace carbohydrates with protein as the income level rises, thus consuming less rice.

Stock-to-use ratio

The Chinese government does not disclose its rice reserves. We estimate that the stock-to-use ratio for rice will stand at about 22% in MY10/11E vs. the USDA's estimate of 31%. We believe the USDA estimate has not factored in the actual decline in arable land.

Biotechnology in China

According to the USDA, China has commercialized six genetically modified plants since 1997: cotton, tomato, sweet pepper, petunia, poplar, and papaya. Among these, insect-resistant (Bt) cotton is the single largest biotechnologically enhanced product produced in the country, with nearly 69% of all cotton planted in China estimated to be produced with Bt cotton varieties. The other crops approved for commercial production are either not being produced (a delayed ripening tomato and a virus-resistant sweet pepper) or are in relatively small production (a virus-resistant papaya on some 3,500ha).

Additionally, China's Ministry of Agriculture has approved strains of genetically modified rice and corn for trial planting. The Ministry commented that crops planted with the technology will be pest and herbicide resistant and further approvals are required before any crops can be grown commercially. We believe the policy move suggests a government intention to use biotechnology as a key tool to ensure food security, given the slow productivity growth of existing crops. However, we do not expect it to boost yield in the next five years, as, according to the US experience, it takes eight years for the GM corn adoption rate to exceed 50%.

Grain policies

The Chinese government plans to remain 95% self-sufficient in domestic grain production. The government estimates that the country's national grain consumption will reach 572.5mn t by 2020. To remain 95% self-sufficient, China would need to increase grain production capacity by 50mn t. One of the key ways China plans to raise grain output is by increasing yields for paddy, wheat, corn and soybean by 0.9% a year until 2020 to increase production capacity by 50mn t. Additionally, the government also plans to lift investment in agriculture infrastructure and technology upgrades, such as irrigation systems, seedling nurseries, improving farming methods, and increasing the level of agricultural mechanization. The Chinese government will also divide the country's arable land into four zones and allocate different production targets, resources and development plans for each. The government also asserts to strictly protect farmland resources and keep a minimum total farmland area of 1.8bn *mu*, or 120mn ha.

Minimum purchase price scheme

The government has implemented a minimum purchase price scheme to boost rural income and achieve its self-sufficiency goal for major staples, which has resulted in significantly higher domestic prices compared with the international market.

Table 17: Minimum purchase price

RMB/kg	2006	2007	2008	2009	2010	2011	2012
Hard white wheat	1.44	1.44	1.54	1.74	1.80	1.90	2.04
YoY % chg		0.0%	6.9%	13.0%	3.4%	5.6%	7.4%
Strong gluten wheat	1.38	1.38	1.44	1.66	1.72	1.86	2.04
YoY % chg		0.0%	4.3%	15.3%	3.6%	8.1%	9.7%
Indica rice	1.40	1.40	1.54	1.80	1.86	2.04	TBD
YoY % chg		0.0%	10.0%	16.9%	3.3%	9.7%	
Japonica rice	1.50	1.50	1.64	1.90	2.10	2.56	TBD
YoY % chg		0.0%	9.3%	15.9%	10.5%	21.9%	

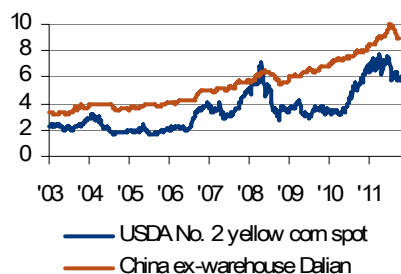
Source: MOA, NDRC, CBOT

Table 18: Grain purchase volume

Mn tonne	2005	2006	2007	2008	2009	2010
State-run enterprises	115.0	122.6	114.0	170.4	163.2	134.3
YoY % chg		6.6%	-7.0%	49.5%	-4.2%	-17.7%
Others	67.2	79.1	103.9	121.4	124.5	166.8
YoY % chg		17.7%	31.4%	16.8%	2.5%	34.0%
Total	182.2	201.7	217.9	291.8	287.65	301.1
YoY % chg		10.7%	8.0%	33.9%	-1.4%	4.7%

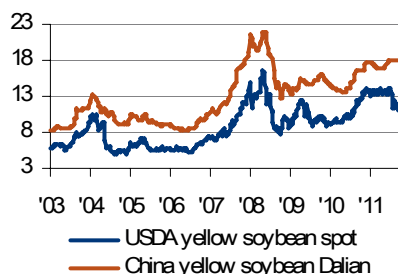
Source: State Administration of Grain (SAG), Xinhua News

Chart 85: China vs int'l corn price (US\$/bu)



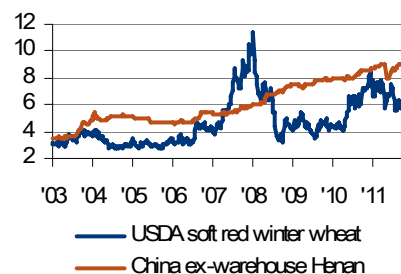
Source: Bloomberg

Chart 86: China vs int'l soybean price (US\$/bu)



Source: Bloomberg

Chart 87: China vs int'l wheat price (US\$/bu)



Source: Bloomberg

Bearish on volume & margin; downgrade to Underperform

Bank of America
Merrill Lynch

Timothy Bush >>

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Downgrade to U/P; cut PO to HK\$1.80

As we detailed in our industry note, we see limited potash consumption growth in China due to continued under-application. On back of this, we downgrade Sinofert from Buy to Underperform and cut FY11-13E earnings by up to 15% pa on sluggish volume and margin pressure. Our reduced PO of HK\$1.80 (implying 22% downside) is based on SOTP valuation: we value the fertilizer distribution business at 11.5x FY12E earnings and we mark Sinofert's stake in Qinghai Salt Lake Potash (QSLP) to market. We cut our PO by 40% due to (1) downward earnings revisions (2) a de-rating of peers and thus lower our target PER multiple from 12.3 to 11.5x and (3) reduction in market value of QSLP stake.

Weak demand to hurt price and volume

We lower FY12E potash (K) sales growth from 10% to 3% as (1) the average farm size in China remains too small to make soil testing cost effective; without proper soil testing, balanced fertilizer application is unlikely; (2) compound fertilizer producers (consuming 60% of potash) tend to substitute high-cost K with low-cost P (phosphate) and N (nitrogen) in the mix but market their products as containing equal amounts of the three nutrients. This behavior contributed to the fall in consumption in 2009 despite increasing affordability throughout the year.

Roll over pricing for 1H12 imports; margin declining

We expect roll over pricing at USD470/t for China's 1H12 potash contract with risk to the downside as a result of weak global demand, particularly in China (stagnant consumption growth) and India (subsidy cut). If we were to assume an import cost of USD470/t and ASP of RMB3,200/t, distribution margin would be only 5%.

Estimates (Dec)

(HK\$)	2009A	2010A	2011E	2012E	2013E
Net Income (Adjusted - CNY mn)	(1,444)	536.03	996.95	869.35	991.79
EPS	(0.234)	0.087	0.161	0.141	0.160
EPS Change (YoY)	NM	NM	86.1%	-12.8%	14.1%
Dividend / Share	0	0	0.027	0.024	0.027
Free Cash Flow / Share (CNY)	0.209	0.210	0.053	0.076	0.025

Valuation (Dec)

	2009A	2010A	2011E	2012E	2013E
P/E	NM	25.6x	13.8x	15.8x	13.8x
Dividend Yield	0%	0%	1.2%	1.1%	1.2%
EV / EBITDA*	NM	59.44x	24.36x	31.01x	29.06x
Free Cash Flow Yield*	11.52%	11.56%	2.91%	4.18%	1.35%

Stock Data

Price	HK\$2.22
Price Objective	HK\$1.80
Date Established	30-Jan-2012
Investment Opinion	C-3-7
Volatility Risk	HIGH
52-Week Range	HK\$1.63-HK\$4.64
Mrkt Val / Shares Out (mn)	US\$2,009 / 7,019.2
Market Value (mn)	HK\$15,583
Average Daily Volume	7,163,738
BofAML Ticker / Exchange	SNFRF / HKG
Bloomberg / Reuters	297 HK / 0297.HK
ROE (2011E)	7.7%
Net Dbt to Eqty (Dec-2010A)	49.0%
Est. 5-Yr EPS / DPS Growth	10.0% / 10.0%
Free Float	25.2%

Key Changes

(CNY)	Previous	Current
Inv. Opinion	C-1-7	C-3-7
Inv. Rating	BUY	UNDERPERFORM
Price Obj.	HK\$3.00	HK\$1.80
2011E EPS (HK\$)	0.19	0.16
2013E EPS (HK\$)	0.17	0.16
2011E EBITDA (m)	1,394.4	834.1
2012E EBITDA (m)	979.6	655.2
2013E EBITDA (m)	1,068.9	699.1

30 January 2012

*iQprofile*SM Sinofert HLDG

Key Income Statement Data (Dec)

(CNY Millions)	2009A	2010A	2011E	2012E	2013E
Sales	27,011	29,271	35,527	36,425	38,977
Gross Profit	(563)	1,491	2,308	2,168	2,314
Sell General & Admin Expense	(1,324)	(1,264)	(1,077)	(1,104)	(1,181)
Operating Profit	(1,944)	452	1,141	957	980
Net Interest & Other Income	(455)	(154)	(245)	(307)	(309)
Associates	250	185	322	412	542
Pretax Income	(2,149)	483	1,218	1,062	1,212
Tax (expense) / Benefit	683	0	(201)	(175)	(200)
Net Income (Adjusted)	(1,444)	536	997	869	992
Average Fully Diluted Shares Outstanding	7,014	7,192	7,019	7,019	7,019

Key Cash Flow Statement Data

Net Income	(1,444)	536	997	869	992
Depreciation & Amortization	259	257	251	256	277
Change in Working Capital	3,593	760	(320)	(5)	(385)
Deferred Taxation Charge	NA	NA	NA	NA	NA
Other Adjustments, Net	(460)	245	(57)	(88)	(212)
Cash Flow from Operations	1,948	1,798	871	1,033	672
Capital Expenditure	(480)	(326)	(500)	(500)	(500)
(Acquisition) / Disposal of Investments	0	0	0	0	0
Other Cash Inflow / (Outflow)	(463)	(158)	(292)	(307)	(309)
Cash Flow from Investing	(943)	(484)	(792)	(807)	(809)
Shares Issue / (Repurchase)	0	0	0	0	0
Cost of Dividends Paid	(287)	0	(150)	(130)	(149)
Cash Flow from Financing	(965)	(1,281)	27	(103)	70
Free Cash Flow	1,468	1,472	371	533	172
Net Debt	7,378	6,343	7,013	6,918	7,204
Change in Net Debt	(981)	(993)	23	(95)	286

Key Balance Sheet Data

Property, Plant & Equipment	4,995	4,848	5,098	5,342	5,564
Other Non-Current Assets	10,005	10,082	10,404	10,816	11,358
Trade Receivables	4,219	5,048	5,490	5,464	5,846
Cash & Equivalents	191	223	328	451	384
Other Current Assets	5,882	5,243	5,419	5,586	5,970
Total Assets	25,291	25,445	26,740	27,659	29,124
Long-Term Debt	3,801	3,573	3,000	2,800	2,800
Other Non-Current Liabilities	915	215	215	215	215
Short-Term Debt	3,768	2,993	4,341	4,569	4,788
Other Current Liabilities	4,272	5,729	5,381	5,516	5,899
Total Liabilities	12,756	12,511	12,938	13,100	13,702
Total Equity	12,535	12,934	13,802	14,559	15,422
Total Equity & Liabilities	25,291	25,445	26,740	27,659	29,124

*iQmethod*SM - Bus Performance*

Return On Capital Employed	-8.4%	0.4%	2.4%	1.6%	1.6%
Return On Equity	-11.1%	4.3%	7.7%	6.3%	6.8%
Operating Margin	-7.2%	1.5%	3.2%	2.6%	2.5%
EBITDA Margin	-9.1%	1.2%	2.3%	1.8%	1.8%

*iQmethod*SM - Quality of Earnings*

Cash Realization Ratio	NM	3.4x	0.9x	1.2x	0.7x
Asset Replacement Ratio	2.0x	1.3x	2.0x	2.0x	1.8x
Tax Rate (Reported)	31.8%	0.1%	16.5%	16.5%	16.5%
Net Debt-to-Equity Ratio	58.9%	49.0%	50.8%	47.5%	46.7%
Interest Cover	-6.0x	0.3x	2.0x	1.3x	1.3x

Key Metrics

Analyst Exchange Rate	0.88	0.86	0.88	0.88	0.88
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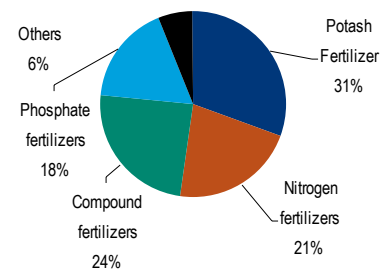
Company Description

Sinofert imports, manufactures and distributes fertilizers. The company's products include potash, phosphate-based, nitrogen-based and compound fertilizers. It is the largest fertilizer distributor in China, and its sales network covers 91% of arable land in the country.

Investment Thesis

We rate Sinofert as Underperform as we see limited volume growth and deteriorating distribution margins. (1) Without farming scale, it is uneconomical to test soil or nutrient content in NPK products, leading to stagnant consumption in the form of both direct application and raw material in NPK production. (2) Spot price in China remains weak on the back of sluggish demand. Even a roll over pricing for imports would imply significant margin contraction in 2012.

Chart 1: Gross profit breakdown, 2012E



Source: BofA Merrill Lynch Global Research

Stock Data

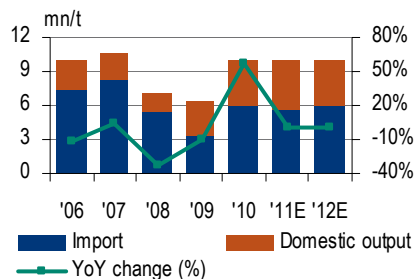
Price to Book Value	0.9x
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Outlook for potash consumption growth remains gloomy

We lower FY12E potash sales growth from 10% to 3% on gloomy consumption outlook. We believe (1) direct application of potash will stay low and (2) blenders are likely to reduce potassium (K) content in NPK fertilizers.

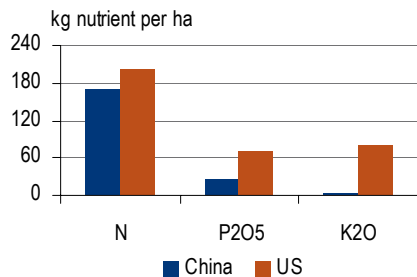
- Previously, we thought a reverse of potash under-application would drive domestic consumption growth as China only applies 6% of the amount of potash US applies on corn and 38% on soybean. However, with an average farm size at 0.6ha, it is not economical to test soil and without recognizing potash deficiency in soil, direct application of potash is likely to stay low.
- Prior to 2007, K was relatively inexpensive as compared to the other two nutrients. Consequently there was little incentive for NPK blenders to reduce K content in the mix. Now it is the most expensive. Using current 15-15-15 NPK market prices, blenders are almost loss making on a per tonne basis. This leads us to believe that blenders will reduce potassium content to maintain profitability. As NPK accounts for 60-70% of total potash applications, this will meaningfully impact demand and thus the domestic price of potash.

Chart 2: China's potash consumption



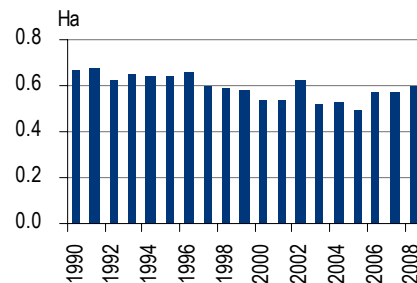
Source: CEIC, BofA Merrill Lynch Global Research

Chart 3: Estimated application rate on corn



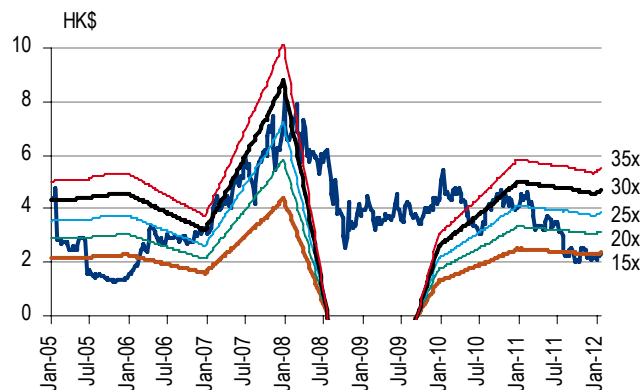
Source: IFA, BofA Merrill Lynch Global Research

Chart 4: Average farm size in China



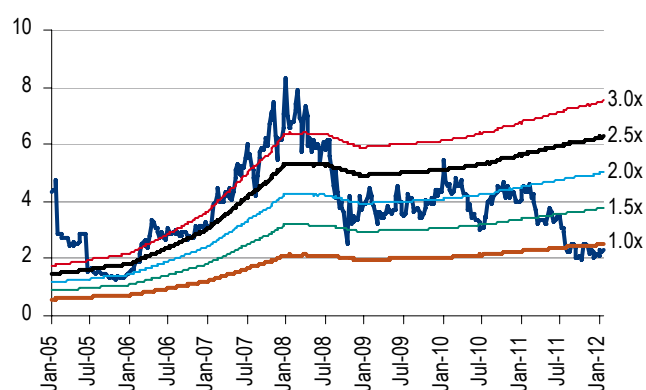
Source: China water risks

Chart 5: 1-year forward PE band



Source: Bloomberg, BofA Merrill Lynch Global Research

Chart 6: 1-year forward PB band



Source: Bloomberg, BofA Merrill Lynch Global Research

30 January 2012

Table 1: Peer Valuation

US\$m		Mkt			Net	P/E					EV/EBITDA				Div		
Co. Name	Ticker	Cap	px_last	Sales	Profit	FY0	FY1	FY2	FY3	P/B	FY0	FY1	FY2	FY3	Yield	ROE	Year End
SINOFERT HOLDING	297 HK	2,042	2.27	4,618	85	26.2	13.1	15.1	13.2	1.0	60.6	24.8	31.6	29.6	1.3	7.7	12/2010
ARCHER-DANIELS	ADM US	18,269	28.64	80,676	1,985	9.8	10.5	9.3		1.0	7.8	7.7	7.3		2.3	9.6	06/2011
BUNGE LTD	BG US	9,386	63.75	45,707	658	13.7	10.2	9.3		0.7	8.3	7.5	7.0		1.7	6.8	12/2010
NOBLE GROUP LTD	NOBL SP	8,141	1.54	56,696	510	13.1	15.9	9.7	7.9	1.4	7.6	7.1	5.2	4.6	1.7	10.6	12/2010
Average						12.2	12.2	9.4	7.9	1.1	7.9	7.5	6.5	4.6	1.9	9.0	

Source: Bloomberg, BofA Merrill Lynch Global Research

Table 2: Earnings revision

	2011E			2012E			2013E		
	Old	New	% chg	Old	New	% chg	Old	New	% chg
YE Dec. 31 (Rmb mn)									
Total revenue	38,015	35,527	-6.5%	40,878	36,425	-10.9%	45,822	38,977	-14.9%
Cost of sales	35,045	33,218	-5.2%	38,190	34,257	-10.3%	42,829	36,663	-14.4%
Gross profit	2,970	2,308	-22.3%	2,688	2,168	-19.4%	2,993	2,314	-22.7%
Other income	200	558	178.9%	200	558	178.9%	200	558	178.9%
SG&A	1,641	1,077	-34.4%	1,765	1,104	-37.4%	1,978	1,181	-40.3%
Other expenses	185	648	249.3%	199	664	233.1%	224	711	218.0%
EBITDA (Core)	1,394	834	-40.2%	980	655	-33.1%	1,069	699	-34.6%
% margin	3.7%	2.3%	-1.32 ppt	2.4%	1.8%	-0.60 ppt	2.3%	1.8%	-0.54 ppt
EBIT (Core)	1,144	583	-49.0%	724	399	-44.8%	792	422	-46.7%
% margin	3.0%	1.6%	-1.37 ppt	1.8%	1.1%	-0.67 ppt	1.7%	1.1%	-0.65 ppt
EBIT incl other inc	1,344	1,141	-15.1%	924	957	3.6%	992	980	-1.2%
% margin	3.5%	3.2%	-0.32 ppt	2.3%	2.6%	0.37 ppt	2.2%	2.5%	0.35 ppt
Net interest	(296)	(292)	-1.2%	(320)	(307)	-4.2%	(336)	(309)	-8.0%
Profit before tax	1,378	1,218	-11.6%	1,022	1,062	4.0%	1,225	1,212	-1.0%
Taxation	(207)	(201)	-2.7%	(153)	(175)	14.4%	(184)	(200)	8.9%
Profit after tax	1,171	1,017	-13.1%	868	887	2.2%	1,041	1,012	-2.8%
% margin	3.1%	2.8%	-0.27 ppt	2.1%	2.4%	0.26 ppt	2.3%	2.5%	0.27 ppt
Minority interests	-	(20)	n/a	-	(18)	n/a	-	(20)	n/a
Net profit	1,171	997	-14.9%	868	869	0.1%	1,041	992	-4.7%
EPS (RMB cent)	16.68	14.20	-14.9%	12.37	12.39	0.1%	14.83	14.13	-4.7%
EPS (HK\$ cent)	18.93	16.12	-14.9%	14.04	14.06	0.1%	16.83	16.04	-4.7%

Source: BofA Merrill Lynch Global Research

30 January 2012

Table 3: Key assumption revision

	2011E			2012E			2013E		
Potash fertilizers	Old	New	% chg	Old	New	% chg	Old	New	% chg
Sales volume (tons)	3,280,000	3,375,355	2.9%	3,600,000	3,476,616	-3.4%	3,960,000	3,580,914	-9.6%
Sales vol yoy % chg	18.5%	22.0%	3.4 ppt	9.8%	3.0%	-6.8 ppt	10.0%	3.0%	-7.0 ppt
Revenue (Rmb mn)	10,496	10,119	-3.6%	11,866	11,152	-6.0%	13,444	11,832	-12.0%
ASP	3,200	2,998	-6.3%	3,296	3,208	-2.7%	3,395	3,304	-2.7%
ASP yoy % chg	21.0%	13.3%	-7.6 ppt	3.0%	7.0%	4.0 ppt	3.0%	3.0%	0.0 ppt
Gross profit (Rmb mn)	1,120	759	-32.2%	949	669	-29.5%	1,075	710	-34.0%
Gross profit margin	10.7%	7.5%	-3.2 ppt	8.0%	6.0%	-2.0 ppt	8.0%	6.0%	-2.0 ppt
Nitrogen fertilizers									
Sales volume (tons)	7,502,837	6,957,176	-7.3%	7,877,979	7,165,892	-9.0%	8,271,878	7,380,868	-10.8%
Sales vol yoy % chg	10.0%	2.0%	-8.0 ppt	5.0%	3.0%	-2.0 ppt	5.0%	3.0%	-2.0 ppt
Revenue (Rmb mn)	12,796	12,088	-5.5%	14,780	13,073	-11.5%	17,071	14,138	-17.2%
ASP	1,706	1,737	1.9%	1,876	1,824	-2.8%	2,064	1,916	-7.2%
ASP yoy % chg	17.8%	20.0%	2.2 ppt	10.0%	5.0%	-5.0 ppt	10.0%	5.0%	-5.0 ppt
Gross profit (Rmb mn)	512	423	-17.3%	591	458	-22.6%	683	495	-27.5%
Gross profit margin	4.0%	3.5%	-0.5 ppt	4.0%	3.5%	-0.5 ppt	4.0%	3.5%	-0.5 ppt
Compound fertilizers									
Sales volume (tons)	2,266,000	2,060,000	-9.1%	2,379,300	2,121,800	-10.8%	2,498,265	2,185,454	-12.5%
Sales vol yoy % chg	10.0%	0.0%	-10.0 ppt	5.0%	3.0%	-2.0 ppt	5.0%	3.0%	-2.0 ppt
Revenue (Rmb mn)	5,718	5,558	-2.8%	5,714	5,892	3.1%	6,153	6,174	0.3%
ASP	2,523	2,698	6.9%	2,402	2,777	15.6%	2,463	2,825	14.7%
ASP yoy % chg	14.3%	22.2%	7.9 ppt	-4.8%	2.9%	7.8 ppt	2.6%	1.7%	-0.8 ppt
Gross profit (Rmb mn)	457	500	9.4%	457	530	16.0%	492	556	12.9%
Gross profit margin	8.0%	9.0%	1.0 ppt	8.0%	9.0%	1.0 ppt	8.0%	9.0%	1.0 ppt
Phosphate fertilizers									
Sales volume (tons)	3,640,111	2,481,894	-31.8%	3,822,117	2,605,989	-31.8%	4,013,223	2,736,288	-31.8%
Sales vol yoy % chg	10.0%	-25.0%	-35.0 ppt	5.0%	5.0%	0.0 ppt	5.0%	5.0%	0.0 ppt
Revenue (Rmb mn)	7,687	6,442	-16.2%	6,958	4,744	-31.8%	7,306	4,981	-31.8%
ASP	2,112	2,595	22.9%	1,820	1,820	0.0%	1,820	1,820	0.0%
ASP yoy % chg	9.5%	34.6%	25.1 ppt	-13.8%	0.0%	13.8 ppt	0.0%	0.0%	0.0 ppt
Gross profit (Rmb mn)	769	515	-33.0%	557	380	-31.8%	584	398	-31.8%
Gross profit margin	10.0%	8.0%	-2.0 ppt	8.0%	8.0%	0.0 ppt	8.0%	8.0%	0.0 ppt
Other revenue (Rmb mn)	1,318	1,320	0.1%	1,561	1,563	0.1%	1,849	1,852	0.1%
Other gross profit (Rmb mn)	113	111	-2.0%	134	131	-2.0%	158	155	-2.0%
Total revenue (Rmb mn)	38,015	35,527	-6.5%	40,878	36,425	-10.9%	45,822	38,977	-14.9%
Total Gross profit (Rmb mn)	2,970	2,308	-22.3%	2,688	2,168	-19.4%	2,993	2,314	-22.7%
Total Gross profit margin	7.8%	6.5%	-1.3 ppt	6.6%	6.0%	-0.6 ppt	6.5%	5.9%	-0.6 ppt

Source: BofA Merrill Lynch Global Research

Reiterate Buy on earnings visibility

Defensiveness to be rewarded again in 2012

We reiterate our Buy rating on BlueChem due to good earnings visibility, as costs, volume and ASP are fairly predictable: 1) its gas cost should remain stable and competitive under the LT gas sourcing contract with its parent company CNOOC; 2) vol. growth will continue to be driven by capacity expansion; 3) fertilizer prices in China have been range-bound since 2010, with downside limited by industry-average cost of production. BlueChem's share price gained 5.6% in 2011 vs. a 20% loss in HSI and we believe its defensiveness will again be rewarded in 2012.

Steady volume growth through capacity expansion

We forecast that FY12E net profit will rise 8% YoY, of which 5% will be driven by ramp-up of 500k/t of DAP capacity at DYK, scheduled to start production at end-Feb, with the remaining 3% contributed by a slight improvement in pricing. In addition, 520k/t of coal-based urea capacity is scheduled to come on line in 2H13, which we haven't factored into our numbers yet due to execution risks, but if we had, this would add 13% to our FY13E earnings and imply 32% YoY growth.

Rising production cost to drive ASP gains

We forecast that the FY12E urea ASP will rise 4% YoY, to RMB2150/t, due to a combination of a 5% surge in domestic prices, driven by the rising cost of production, and similar export netbacks akin to FY11E. We estimate the average coal-based urea production cost at RMB1926/t, flat compared to 2011, as lower a coal price offsets the RMB0.03/kwh hike in retail power tariff hike, on average, effective 1 Dec 2011.

Valuation update

However, we cut our PO by 21%, to HK\$7.0 (DCF-derived; 19% upside), due to a combination of the delayed ramp up of a coal-based urea project in Huahe, Heilongjiang Province, and an increase of the interest rate assumption for our WACC calculation.

Estimates (Dec)

(CNY)	2009A	2010A	2011E	2012E	2013E
Net Income (Adjusted - mn)	985	1,175	1,906	2,059	2,418
EPS	0.214	0.255	0.413	0.447	0.524
EPS Change (YoY)	-38.8%	19.4%	62.1%	8.0%	17.4%
Dividend / Share	0.070	0.090	0.146	0.158	0.185
Free Cash Flow / Share	0.106	0.105	0.294	0.214	0.338

Valuation (Dec)

	2009A	2010A	2011E	2012E	2013E
P/E	23.66x	19.09x	11.25x	10.51x	8.95x
Dividend Yield	1.39%	1.85%	3.14%	3.36%	3.95%
EV / EBITDA*	10.39x	8.51x	5.52x	5.00x	4.33x
Free Cash Flow Yield*	2.26%	2.24%	6.26%	4.55%	7.20%

**Bank of America
Merrill Lynch**

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Stock Data

Price	HK\$5.74
Price Objective	HK\$7.00
Date Established	30-Jan-2012
Investment Opinion	C-1-7
Volatility Risk	HIGH
52-Week Range	HK\$4.34-HK\$7.17
Mrkt Val / Shares Out (mn)	US\$3,412 / 4,610.0
Market Value (mn)	HK\$26,461
Average Daily Volume	3,916,227
BofAML Ticker / Exchange	CBLUF / HKG
Bloomberg / Reuters	3983 HK / 3983.HK
ROE (2011E)	16.8%
Net Dbt to Eqty (Dec-2010A)	-17.2%
Est. 5-Yr EPS / DPS Growth	10.0% / 10.0%
Free Float	40.0%

Key Changes

(CNY)	Previous	Current
Price Obj.	HK\$8.90	HK\$7.00
2011E EPS	0.42	0.41
2012E EPS	0.46	0.45
2013E EPS	0.48	0.52
2011E EBITDA (m)	3,546.7	3,699.2
2012E EBITDA (m)	4,076.3	4,087.1
2013E EBITDA (m)	4,268.6	4,722.5

30 January 2012

iQprofileSM China BlueChem

Key Income Statement Data (Dec)	2009A	2010A	2011E	2012E	2013E
(CNY Millions)					
Sales	5,795	6,867	9,873	11,293	12,864
Gross Profit	1,719	2,189	3,499	3,882	4,499
Sell General & Admin Expense	(482)	(530)	(780)	(906)	(1,033)
Operating Profit	1,237	1,658	2,719	2,976	3,465
Net Interest & Other Income	60	28	(43)	(42)	(47)
Associates	15	0	0	0	0
Pretax Income	1,312	1,686	2,676	2,933	3,418
Tax (expense) / Benefit	(198)	(316)	(589)	(645)	(752)
Net Income (Adjusted)	985	1,175	1,906	2,059	2,418
Average Fully Diluted Shares Outstanding	4,610	4,610	4,610	4,610	4,610

Key Cash Flow Statement Data

Net Income	985	1,175	1,906	2,059	2,418
Depreciation & Amortization	729	744	980	1,111	1,257
Change in Working Capital	(20)	(205)	286	85	135
Deferred Taxation Charge	NA	NA	NA	NA	NA
Other Adjustments, Net	78	241	182	229	248
Cash Flow from Operations	1,772	1,956	3,354	3,485	4,058
Capital Expenditure	(1,284)	(1,472)	(2,000)	(2,500)	(2,500)
(Acquisition) / Disposal of Investments	27	44	(10)	5	4
Other Cash Inflow / (Outflow)	(619)	(83)	7	15	18
Cash Flow from Investing	(1,876)	(1,511)	(2,003)	(2,481)	(2,479)
Shares Issue / (Repurchase)	0	0	0	0	0
Cost of Dividends Paid	(438)	(323)	(415)	(673)	(727)
Cash Flow from Financing	(2,198)	(2)	(260)	(689)	(746)
Free Cash Flow	488	484	1,354	985	1,558
Net Debt	(1,944)	(2,051)	(2,978)	(3,292)	(4,126)
Change in Net Debt	1,944	(147)	(926)	(315)	(834)

Key Balance Sheet Data

Property, Plant & Equipment	7,395	8,944	9,988	11,401	12,668
Other Non-Current Assets	1,647	1,708	1,695	1,668	1,642
Trade Receivables	725	438	630	720	821
Cash & Equivalents	1,945	2,387	3,478	3,792	4,626
Other Current Assets	935	1,051	1,407	1,625	1,826
Total Assets	12,646	14,528	17,198	19,207	21,583
Long-Term Debt	1	336	500	500	500
Other Non-Current Liabilities	249	244	244	244	244
Short-Term Debt	0	0	0	0	0
Other Current Liabilities	1,452	2,025	2,859	3,253	3,689
Total Liabilities	1,702	2,605	3,603	3,997	4,433
Total Equity	10,944	11,922	13,595	15,210	17,149
Total Equity & Liabilities	12,646	14,527	17,198	19,207	21,583

iQmethodSM - Bus Performance*

Return On Capital Employed	9.3%	11.4%	15.9%	15.5%	16.1%
Return On Equity	9.9%	11.6%	16.8%	16.1%	16.9%
Operating Margin	21.3%	24.1%	27.5%	26.4%	26.9%
EBITDA Margin	33.9%	35.0%	37.5%	36.2%	36.7%

iQmethodSM - Quality of Earnings*

Cash Realization Ratio	1.8x	1.7x	1.8x	1.7x	1.7x
Asset Replacement Ratio	1.8x	2.0x	2.1x	2.3x	2.0x
Tax Rate (Reported)	15.1%	18.7%	22.0%	22.0%	22.0%
Net Debt-to-Equity Ratio	-17.8%	-17.2%	-21.9%	-21.6%	-24.1%
Interest Cover	NM	NM	NM	NM	NM

Key Metrics

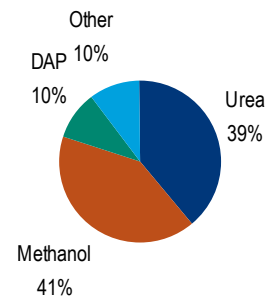
Company Description

China BlueChem manufactures, develops, and sells urea and high value-added synthetic chemical products with natural gas as the raw material. It is among the largest in output and most energy efficient nitrogenous fertilizer producer in China. Its sales network covers 20 provinces in China. The company aims to grow by expanding production capacity and diversifying its product mix.

Investment Thesis

We believe earnings visibility and China BlueChem's potential to be a major long-term consolidator in China's highly fragmented fertilizer manufacturing industry is not fully reflected in the share price. The company has the potential to more than double its production capacity over next five years by both greenfield expansions and acquisitions. Along with capacity growth, it would also benefit from encouraging pricing for urea and DAP.

Chart 1: Gross profit breakdown, 2012E



Source: BofA Merrill Lynch Global Research

Stock Data

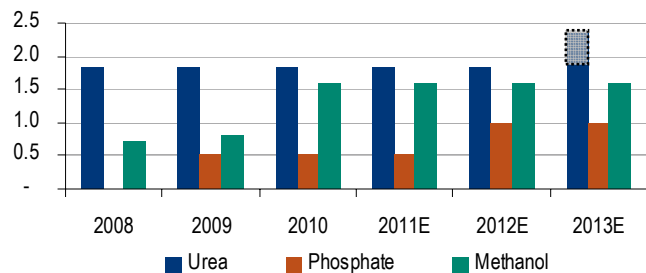
Price to Book Value

1.8x

Steady earnings growth through capacity expansion

We forecast that FY12E net profit will rise 8% YoY, of which 5% will be driven by the ramp-up of 500k/t of DAP capacity at DYK, scheduled to start production at the end of Feb, with the remaining 3% contributed by a slight improvement in pricing. In addition, 520k/t of coal-based urea capacity is scheduled to come on line in 2H13, which we haven't factored into our numbers yet due to execution risks, but if we had, this would add 13% to our FY13E earnings and imply 32% YoY growth.

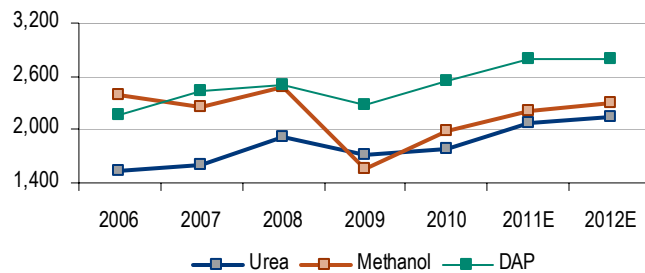
Chart 2: Capacity by division (mn/t)



Source: Company, BofA Merrill Lynch Global Research

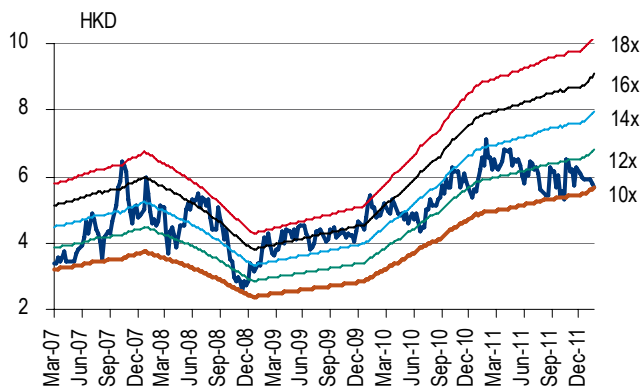
Note: The dotted area represents potential capacity addition from coal-based urea project scheduled to come online in 2H13 that we haven't factored in our forecast due to execution risks.

Chart 3: ASP by chemical (RMB/t)



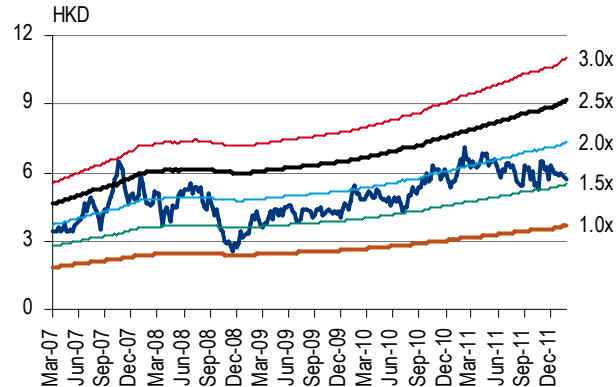
Source: Company, BofA Merrill Lynch Global Research

Chart 4: 1-year forward PE band



Source: Bloomberg, BofA Merrill Lynch Global Research

Chart 5: 1-year forward PB band



Source: Bloomberg, BofA Merrill Lynch Global Research

30 January 2012

Table 1: Earnings revision

	2011E			2012E			2013E		
	Old	New	% chg	Old	New	% chg	Old	New	% chg
External sales	9,197	9,873	7.4%	10,408	11,293	8.5%	11,669	12,864	10.2%
Other business income	-	-	n/a	-	-	n/a	-	-	n/a
Total revenue	9,197	9,873	7.4%	10,408	11,293	8.5%	11,669	12,864	10.2%
Cost of sales	(5,957)	(6,374)	7.0%	(6,806)	(7,412)	8.9%	(7,796)	(8,365)	7.3%
Gross profit	3,240	3,499	8.0%	3,603	3,882	7.7%	3,873	4,499	16.2%
Other income	67	-	-100.0%	67	-	-100.0%	67	-	-100.0%
SG&A	(674)	(780)	15.8%	(762)	(906)	18.8%	(855)	(1,033)	20.9%
Other expenses	(47)	(50)	7.4%	(53)	(57)	8.5%	(59)	(65)	10.2%
EBITDA (Core)	3,547	3,699	4.3%	4,076	4,087	0.3%	4,269	4,722	10.6%
% margin	39%	37%	-1.10 ppt	39%	36%	-2.97 ppt	37%	37%	0.13 ppt
EBIT (Core)	2,567	2,719	5.9%	2,840	2,976	4.8%	3,018	3,465	14.8%
% margin	28%	28%	-0.37 ppt	27%	26%	-0.94 ppt	26%	27%	1.08 ppt
EBIT incl other inc	2,587	2,669	3.2%	2,855	2,919	2.2%	3,026	3,400	12.4%
% margin	0.3	0.3	-1.10 ppt	0.3	0.3	-1.58 ppt	0.3	0.3	0.50 ppt
Net interest	11	7	-36.9%	19	15	-23.0%	23	18	-23.1%
Profit before tax	2,599	2,676	3.0%	2,874	2,933	2.1%	3,049	3,418	12.1%
Taxation	(513)	(589)	14.7%	(596)	(645)	8.2%	(663)	(752)	13.4%
Profit after tax	2,086	2,088	0.1%	2,278	2,288	0.5%	2,386	2,666	11.7%
% margin	21%	19%	-1.81 ppt	20%	18%	-2.23 ppt	19%	19%	-0.31 ppt
Minority interests	(144)	(182)	26.7%	(148)	(229)	54.7%	(156)	(248)	58.7%
Net profit	1,942	1,906	-1.9%	2,129	2,059	-3.3%	2,230	2,418	8.4%
EPS (RMB cents)	42	41	-1.9%	46	45	-3.3%	48	52	8.4%
EPS diluted (RMB cents)	42	41	-1.9%	46	45	-3.3%	48	52	8.4%

Source: Company data, BofA Merrill Lynch Global Research

30 January 2012

Table 2: Key assumptions revision

	2011E			2012E			2013E		
	Old	New	% chg	Old	New	% chg	Old	New	% chg
Urea									
Capacity (tpa - 300 working days)	1,840,000	1,840,000	0.0%	1,840,000	1,840,000	0.0%	1,840,000	1,840,000	0.0%
Utilization (% - 300 working days)	106%	106%	0.25 ppt	106%	102%	-3.95 ppt	106%	108%	2.04 ppt
Output (tpa)	1,953,209	1,957,761	0.2%	1,953,209	1,880,493	-3.7%	1,953,209	1,990,660	1.9%
Sales volume (tpa)	1,953,209	1,957,761	0.2%	1,953,209	1,880,493	-3.7%	1,953,209	1,990,660	1.9%
ASP (RMB/t)	1,997	2,075	3.9%	2,134	2,152	0.8%	2,348	2,366	0.8%
Sales (RMB mn)	3,849	4,048	5.2%	4,114	3,956	-3.8%	4,525	4,602	1.7%
Gross profit (RMB mn)	1,796	1,657	-7.8%	1,940	1,514	-22.0%	1,867	1,838	-1.5%
Gross margin (%)	47%	41%	-5.74 ppt	47%	38%	-8.89 ppt	41%	40%	-1.31 ppt
Methanol									
Capacity (tpa - 365 working days)	1,600,000	1,600,000	0.0%	1,600,000	1,600,000	0.0%	1,600,000	1,600,000	0.0%
Utilization (% - 365 working days)	97%	103%	5.91 ppt	97%	104%	7.11 ppt	97%	105%	7.73 ppt
Output (tpa)	1,551,014	1,645,564	6.1%	1,551,014	1,664,739	7.3%	1,551,014	1,674,739	8.0%
Sales volume (tpa)	1,551,014	1,557,335	0.4%	1,551,014	1,664,739	7.3%	1,551,014	1,674,739	8.0%
ASP (RMB/t)	2,200	2,200	0.0%	2,310	2,310	0.0%	2,426	2,426	0.0%
Sales (RMB mn)	3,412	3,426	0.4%	3,583	3,846	7.3%	3,762	4,062	8.0%
Gross profit (RMB mn)	894	1,437	60.7%	930	1,588	70.9%	1,037	1,647	58.7%
Gross margin (%)	26%	42%	15.74 ppt	26%	41%	15.36 ppt	28%	41%	12.96 ppt
DAP									
Capacity (tpa - 365 working days)	350,000	350,000	0.0%	850,000	850,000	0.0%	850,000	850,000	0.0%
Utilization (% - 365 working days)	109%	108%	-0.77 ppt	83%	91%	8.00 ppt	100%	108%	7.79 ppt
Output (tpa)	379,959	377,280	-0.7%	704,959	772,930	9.6%	922,758	916,251	-0.7%
Sales volume (tpa)	379,959	393,455	3.6%	704,959	772,930	9.6%	922,758	916,251	-0.7%
ASP (RMB/t)	3,119	2,800	-10.2%	2,689	2,800	4.1%	2,689	2,884	7.3%
Sales (RMB mn)	1,185	1,102	-7.0%	1,895	2,164	14.2%	2,481	2,642	6.5%
Gross profit (RMB mn)	319	181	-43.3%	485	377	-22.2%	675	512	-24.2%
Gross margin (%)	27%	16%	-10.51 ppt	26%	17%	-8.15 ppt	27%	19%	-7.85 ppt
Others									
Sales (RMB mn)	751	1,298	72.7%	816	1,328	62.6%	901	1,558	72.9%
Gross profit (RMB mn)	231	225	-2.7%	248	402	61.8%	294	502	71.0%
Gross margin (%)	31%	17%	-13.42 ppt	30%	30%	-0.16 ppt	33%	32%	-0.37 ppt
Total revenue (RMB mn)	9,197	9,873	7.4%	10,408	11,293	8.5%	11,669	12,864	10.2%
Total gross profit (RMB mn)	3,240	3,499	8.0%	3,603	3,882	7.7%	3,873	4,499	16.2%
Group-level gross margin (%)	35%	35%	0.21 ppt	35%	34%	-0.24 ppt	33%	35%	1.78 ppt

Source: Company data, BofA Merrill Lynch Global Research

Food CPI reaching inflection point may trigger re-rating

Bank of America
Merrill Lynch

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Food CPI reaching inflection point may trigger re-rating

We reiterate Buy on China Agri as we anticipate crush margin to widen as food inflation bottoms out - this should present a good entry point, in our view. Additionally, we believe rising live pig inventory should increase feed requirement and thus soy meal demand. Furthermore, given inflation less of a concern in 2012, we think further price intervention measures are unlikely. Our new PO of HK\$8.4 is based on 11x FY12e EPS of HK\$0.766, 11% lower than previously due to lower multiple as peer group de-rated, but still implies 29% upside to the current market price.

Expect crush margin improvement when food CPI bottoms

Historically, the crush margin usually picked up when food inflation bottomed out as crushers were able to consume lower-cost soybean inventory for months while benefiting from higher selling prices for soy meal and oil. With that said, the up-cycle of crush margin lasted roughly four months on average before reaching the inflection point.

Rising live pig inventory, positive for soy meal demand

Live pig inventory increased 5% since mid-2011 and it is likely to stay at the elevated level if not higher because the inventory of sows (to reproduce pigs) also increased 4% in the same period. This would be positive for soy meal demand.

Further price control unlikely as inflation concern eases

Generally speaking, China Agri is a beneficiary in a rising price environment – the correlation between share price and food CPI over the past two years is 64%. But it appears that this correlation breaks down when food CPI gets above 10% due to the concerns of price caps. Price control is unlikely to be a concern in 2012.

Stock Data

Price	HK\$6.38
Price Objective	HK\$8.40
Date Established	30-Jan-2012
Investment Opinion	C-1-8
Volatility Risk	HIGH
52-Week Range	HK\$4.13-HK\$9.47
Mrkt Val / Shares Out (mn)	US\$3,322 / 4,038.4
Market Value (mn)	HK\$25,765
Average Daily Volume	4,325,945
BofAML Ticker / Exchange	CIDHF / HKG
Bloomberg / Reuters	606 HK / 0606.HK
ROE (2011E)	15.0%
Net Dbt to Eqty (Mar-2010A)	91.1%
Est. 5-Yr EPS / DPS Growth	10.0% / 10.0%
Free Float	38.6%

Key Changes

(HK\$)	Previous	Current
Price Obj.	9.40	8.40

Estimates (Dec)

(HK\$)	2009A	2010A	2011E	2012E	2013E
Net Income (Adjusted - mn)	1,952	1,702	3,055	3,365	3,756
EPS	0.517	0.415	0.696	0.766	0.855
EPS Change (YoY)	-29.2%	-19.6%	67.5%	10.1%	11.6%
Dividend / Share	0.129	0.108	0.189	0.208	0.232
Free Cash Flow / Share	(1.25)	(3.00)	(0.625)	(0.832)	(0.126)

Valuation (Dec)

	2009A	2010A	2011E	2012E	2013E
P/E	12.34x	15.36x	9.17x	8.33x	7.46x
Dividend Yield	2.02%	1.69%	2.96%	3.25%	3.63%
EV / EBITDA*	15.63x	20.66x	9.07x	7.71x	6.86x
Free Cash Flow Yield*	-18.24%	-45.89%	-9.80%	-13.04%	-1.97%

30 January 2012

*iQprofile*SM China Agri-Industries Hldgs

Key Income Statement Data (Dec)	2009A	2010A	2011E	2012E	2013E
(HK\$ Millions)					
Sales	43,828	53,492	73,584	90,779	105,233
Gross Profit	3,259	3,211	6,502	7,892	9,209
Sell General & Admin Expense	(2,418)	(3,096)	(3,870)	(4,775)	(5,535)
Operating Profit	2,176	1,419	3,936	4,421	4,978
Net Interest & Other Income	(196)	(297)	(505)	(607)	(679)
Associates	355	353	353	353	353
Pretax Income	2,336	1,475	3,784	4,167	4,651
Tax (expense) / Benefit	(292)	(192)	(568)	(625)	(698)
Net Income (Adjusted)	1,952	1,702	3,055	3,365	3,756
Average Fully Diluted Shares Outstanding	3,775	4,096	4,391	4,391	4,391

Key Cash Flow Statement Data

Net Income	1,952	1,702	3,055	3,365	3,756
Depreciation & Amortization	703	760	1,027	1,414	1,583
Change in Working Capital	(5,257)	(9,229)	461	(5,008)	(4,200)
Deferred Taxation Charge	NA	NA	NA	NA	NA
Other Adjustments, Net	(514)	(1,444)	(145)	(135)	(121)
Cash Flow from Operations	(3,116)	(8,212)	4,399	(364)	1,018
Capital Expenditure	(1,583)	(3,611)	(6,924)	(2,995)	(1,526)
(Acquisition) / Disposal of Investments	1	0	0	0	0
Other Cash Inflow / (Outflow)	(11)	(136)	(187)	(200)	(225)
Cash Flow from Investing	(1,594)	(3,747)	(7,111)	(3,195)	(1,751)
Shares Issue / (Repurchase)	5	1,533	0	0	0
Cost of Dividends Paid	(1,022)	(617)	(424)	(761)	(839)
Cash Flow from Financing	5,329	13,659	(348)	3,720	541
Free Cash Flow	(4,699)	(11,823)	(2,525)	(3,359)	(507)
Net Debt	7,764	19,294	22,648	27,174	28,916
Change in Net Debt	5,555	7,014	3,060	4,255	1,516

Key Balance Sheet Data

Property, Plant & Equipment	9,572	13,349	19,254	20,834	20,776
Other Non-Current Assets	4,266	5,522	6,050	6,600	7,174
Trade Receivables	1,921	2,399	3,299	4,070	4,719
Cash & Equivalents	5,515	7,404	4,345	4,505	4,313
Other Current Assets	14,817	28,045	27,750	34,093	39,396
Total Assets	36,092	56,720	60,698	70,102	76,378
Long-Term Debt	1,246	6,279	6,356	6,883	7,077
Other Non-Current Liabilities	314	636	636	636	636
Short-Term Debt	12,033	20,419	20,637	24,796	26,152
Other Current Liabilities	4,103	8,209	9,101	11,038	12,648
Total Liabilities	17,696	35,544	36,730	43,353	46,514
Total Equity	18,396	21,176	23,968	26,749	29,864
Total Equity & Liabilities	36,092	56,720	60,698	70,102	76,378

*iQmethod*SM - Bus Performance*

Return On Capital Employed	7.0%	3.2%	6.9%	6.9%	7.0%
Return On Equity	13.3%	9.7%	15.0%	14.6%	14.6%
Operating Margin	5.0%	2.7%	5.3%	4.9%	4.7%
EBITDA Margin	6.6%	4.1%	6.7%	6.4%	6.2%

*iQmethod*SM - Quality of Earnings*

Cash Realization Ratio	-1.6x	-4.8x	1.4x	-0.1x	0.3x
Asset Replacement Ratio	2.3x	5.0x	7.0x	2.2x	1.0x
Tax Rate (Reported)	12.5%	13.0%	15.0%	15.0%	15.0%
Net Debt-to-Equity Ratio	42.2%	91.1%	94.5%	101.6%	96.8%
Interest Cover	9.1x	3.8x	6.4x	6.6x	6.7x

Key Metrics

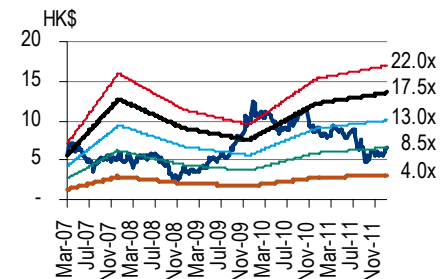
Company Description

China Agri is a leading producer and supplier of processed agricultural products in China, mainly engaged in five business sectors: oilseed processing, biofuel and biochemical, rice trading and processing, brewing materials and wheat processing. It sells the majority of its products in China and also exports rice products to Asia and Africa.

Investment Thesis

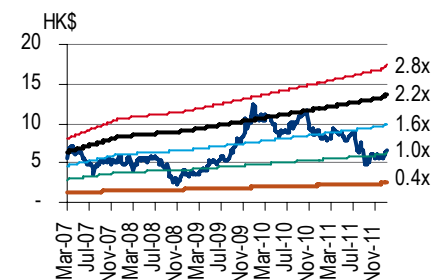
We expect strong volume growth fuelled by capacity expansion and industry consolidation, combined with steady ASP growth, to drive long-term earnings growth. In the near-term, we see lessening of administrative price control to remove share price overhang and expect further earnings momentum into 2H11 driven by seasonally strong edible oil consumption and improving demand for meals and feeds.

Chart 1: 1-year forward PE band



Source: Bloomberg, BofA Merrill Lynch Global Research

Chart 2: 1-year forward PB band



Source: Bloomberg, BofA Merrill Lynch Global Research

Stock Data

Price to Book Value

1.2x

30 January 2012

Table 1: Peer valuation

Table 11-3: Valuation																					
US\$m		Mkt			Net	P/E					EV/EBITDA				Div			Year	BofAML		
Co. Name	Ticker	Cap	px	Sales	Profit	FY0	FY1	FY2	FY3	P/B	FY0	FY1	FY2	FY3	Yield	ROE	End	Symbol	REC.	QRQ	
International																					
		27,398																			
WILMAR INTERNATI	WIL SP	8	5.4	30,378	1,029	26.5	18.0	14.5	12.9	2.3	22.6	13.5	11.0	10.1	1.3	9.0	12/2010	WLMIF	Buy	B-1-8	
		19,919																			
ARCHER-DANIELS	ADM US	9	29.8	80,676	1,985	9.8	10.5	9.3		1.1	7.8	7.7	7.3		2.2	10.5	06/2011	ADM	U/P	B-3-7	
																		Neutra			
BUNGE LTD	BG US	8,417	57.8	45,707	658	13.7	10.2	9.3		0.8	8.3	7.5	7.0		1.6	5.7	12/2010	BG	I	B-2-7	
TYSON FOODS-A	TSN US	7,055	18.8	32,258	717	9.9	8.4	7.8	7.7	1.2	4.8	4.4	4.3	4.0	0.9	12.3	09/2011	TSN	Buy	C-1-7	
SMITHFIELD FOODS	SFD US	3,689	22.9	12,203	492	7.8	8.2	8.2	7.9	1.1	4.8	5.0	5.3	5.0	0.0	13.9	04/2011	SFD	Buy	C-1-9	
NOBLE GROUP LTD	NOBL SP	6,747	1.3	56,696	510	13.1	15.9	9.7	7.9	1.7	7.6	7.1	5.2	4.6	2.3	14.7	12/2010	NOBGF	Buy	C-1-7	
OLAM INTERNATIONAL	OLAM SP	4,907	2.5	12,772	206	26.7	20.7	18.3	16.1	2.0	7.5	10.9	9.5	8.2	1.6	12.1	12/2010	OLMIF	U/P	C-3-7	
Average						15.4	13.1	11.0	10.5	1.5	9.1	8.0	7.1	6.4	1.4	11.2					
China																					
CHINA FOODS LTD	506 HK	2,203	6.1	2,569	55	30.3	25.6	19.7	15.5	2.7	14.3	12.0	9.6	7.8	1.2	7.5	12/2010	n/a	n/a	n/a	
XIWANG SUGAR	2088 HK	150	1.2	481	31	4.3	4.4	4.0	7.2	0.5	14.3	n/a	n/a	n/a	0.0	12.2	12/2010	n/a	n/a	n/a	
GLOBAL SWEETENER	3889 HK	179	0.9	432	12	8.1	5.1	4.9	4.1	0.5	14.3	n/a	n/a	n/a	0.0	5.0	12/2010	n/a	n/a	n/a	
GLOBAL BIO-CHEM	809 HK	744	1.8	1,199	43	6.7	5.1	5.7	3.3	0.6	14.3	4.6	4.0	3.3	1.4	4.1	12/2010	n/a	n/a	n/a	
Average						12.3	10.0	8.6	7.5	1.1	14.3	8.3	6.8	5.5	0.7	7.2					
All peers average						13.0	10.6	9.3	8.4	1.2	11.7	7.8	6.9	6.0	0.9	8.9					

Source: Bloomberg, BofA Merrill Lynch Global Research

Good earnings visibility & low risk profile; reiterate Buy

Equity | Hong Kong | Industrials/Multi-Industry
30 January 2012

Bank of America
Merrill Lynch

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High earnings visibility & low risk profile; reiterate Buy

We reiterate Buy on Asian Citrus Holdings (ACH) with a PO of HK\$9.0. Since its listing in London in 2005, ACH has delivered 15% CAGR in EPS excluding biological asset gains (ex-BA) over the past five years. We expect the production of 3.3mn trees to contribute 13% out of 29% growth in FY12E ex-BA profit. With no debt, positive FCF, an RMB2bn war chest and organic earnings visibility, we believe this is an attractive name to hold in the current environment. Our PO is based on a sum-of-the-parts valuation: 84% derived from DCF of three existing plantations; the remaining 16% based on 5.9x BPG's FY12E earnings.

Upstream business well on track

We expect the FY12E gross profit of plantation business to grow 18% supported by (1) 13% output growth, mainly contributed by Xinfeng plantation with maturing trees; (2) a 4% rise in average ASP due to a combination of general orange price growth and a shift in the distribution channel towards supermarkets from corporate / wholesale market; (3) further margin expansion, especially at Xinfeng as a result of better economies of scale. We expect the annual yield at Xinfeng plantation to rise to c.200,000t when fully mature by 2018E from 93,181t in FY11.

Smooth integration of BPG; capacity expansion underway

Our belief that BPG's integration is progressing smoothly is supported by a rising capacity utilization rate and stable margin. Stripping out the effect of an unexpected sourcing from a large customer, FY11 GPM would be in-line with its historical range of 38%.

Stock Data

Price (LSE / HKG)	35.50p / HK\$4.29
Price Objective	73.40p / HK\$9.00
Date Established	27-Sep-2011 / 27-Sep-2011
Investment Opinion	C-1-8 / C-1-8
Volatility Risk	HIGH / HIGH
52-Week Range	27.48p-79.70p
Market Value (mn)	US\$676
Market Value (mn)	£431
Shares Outstanding (mn)	1,215.2 / 1,215.2
Average Daily Volume	795,337
BofAML Ticker / Exchange	ACTFF / LSE
BofAML Ticker / Exchange	XCHUF / HKG
Bloomberg / Reuters	ACHL LN / ACHLA.L
ROE (2012E)	8.2%
Net Dbt to Eqty (Jun-2011A)	-29.3%
Est. 5-Yr EPS / DPS Growth	20.0% / 20.0%
Free Float	32.4%

Estimates (Jun)

(£)	2010A	2011A	2012E	2013E	2014E
Net Income (Adjusted - CNY mn)	279.47	511.99	662.21	847.93	992.34
EPS (ex-BA) Change (YoY)	-15%	38%	13%	28%	17%
EPS	0.072	0.105	0.093	0.118	0.142
EPS Change (YoY)	40.3%	44.5%	-11.2%	26.8%	20.5%
EPS (ex-BA)	0.351	0.484	0.545	0.698	0.817
Dividend / Share	0.012	0.008	0.008	0.011	0.013
Free Cash Flow / Share (CNY)	0.256	0.364	0.270	0.581	0.760
Common - Dual Listed EPS (HK\$)	0.735	1.05	0.968	1.23	1.48
Common - Dual Listed Dividend / Share (HK\$)	0.120	0.078	0.088	0.113	0.132

Valuation (Jun)

	2010A	2011A	2012E	2013E	2014E
P/E	4.900x	3.391x	3.818x	3.011x	2.498x
Dividend Yield	3.3%	2.2%	2.4%	3.1%	3.6%
EV / EBITDA*	2.86x	1.54x	1.39x	1.11x	0.934x
Free Cash Flow Yield*	4.72%	8.93%	7.67%	16.47%	21.57%

30 January 2012

iQprofileSM Asian Citrus Holdings Ltd.

Key Income Statement Data (Jun) (CNY Millions)

	2010A	2011A	2012E	2013E	2014E
Sales	812	1,413	1,924	2,525	2,778
Gross Profit	468	739	981	1,273	1,462
Sell General & Admin Expense	(189)	(225)	(306)	(402)	(442)
Operating Profit	280	514	675	871	1,019
Net Interest & Other Income	2	2	6	6	8
Associates	0	0	0	0	0
Pretax Income	587	1,121	1,194	1,520	1,832
Tax (expense) / Benefit	(2)	(2)	0	0	0
Net Income (Adjusted)	279	512	662	848	992
Average Fully Diluted Shares Outstanding	796	1,057	1,215	1,215	1,215

Key Cash Flow Statement Data

Net Income	585	1,110	1,176	1,491	1,797
Depreciation & Amortization	72	102	164	180	192
Change in Working Capital	(21)	(47)	(84)	(99)	(42)
Deferred Taxation Charge	NA	NA	NA	NA	NA
Other Adjustments, Net	(299)	(550)	(501)	(621)	(778)
Cash Flow from Operations	338	615	754	952	1,170
Capital Expenditure	(136)	(232)	(426)	(246)	(246)
(Acquisition) / Disposal of Investments	(2)	(383)	0	0	0
Other Cash Inflow / (Outflow)	2	2	6	6	8
Cash Flow from Investing	(135)	(613)	(420)	(240)	(238)
Shares Issue / (Repurchase)	339	1,316	0	0	0
Cost of Dividends Paid	(20)	(62)	(83)	(107)	(137)
Cash Flow from Financing	312	1,088	(87)	(111)	(141)
Free Cash Flow	202	383	328	706	924
Net Debt	(975)	(2,232)	(2,462)	(3,063)	(3,854)
Change in Net Debt	(514)	(1,090)	(247)	(601)	(791)

Key Balance Sheet Data

Property, Plant & Equipment	2,675	3,764	4,526	5,183	5,977
Other Non-Current Assets	92	1,395	1,394	1,392	1,391
Trade Receivables	20	97	131	173	190
Cash & Equivalents	975	2,232	2,462	3,063	3,854
Other Current Assets	110	198	269	354	389
Total Assets	3,871	7,686	8,783	10,164	11,800
Long-Term Debt	0	0	0	0	0
Other Non-Current Liabilities	0	0	0	0	0
Short-Term Debt	0	0	0	0	0
Other Current Liabilities	52	62	84	110	121
Total Liabilities	52	62	84	110	121
Total Equity	3,819	7,623	8,698	10,053	11,678
Total Equity & Liabilities	3,871	7,685	8,782	10,163	11,799

iQmethodSM - Bus Performance*

Return On Capital Employed	15.7%	17.6%	13.2%	14.6%	15.2%
Return On Equity	8.3%	9.0%	8.2%	9.1%	9.2%
Operating Margin	34.4%	36.4%	35.1%	34.5%	36.7%
EBITDA Margin	80.9%	86.4%	70.3%	67.1%	72.6%

iQmethodSM - Quality of Earnings*

Cash Realization Ratio	1.2x	1.2x	1.1x	1.1x	1.2x
Asset Replacement Ratio	2.0x	2.4x	2.7x	1.4x	1.3x
Tax Rate (Reported)	0.3%	0.2%	NM	NM	NM
Net Debt-to-Equity Ratio	-25.5%	-29.3%	-28.3%	-30.5%	-33.0%
Interest Cover	NM	NM	NA	NA	NA

Key Metrics

Analyst Exchange Rate	10.15	10.03	10.41	10.41	10.41
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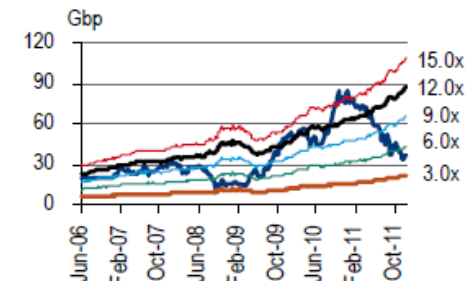
Company Description

Asian Citrus is the largest orange plantation owner and operator in China. The orange industry is fragmented and Asian Citrus has a market share of 2.4% in 2007. The total cultivation base of Asian Citrus is 6,800 hectares and another 3,500 hectares are planned for its Hunan plantation.

Investment Thesis

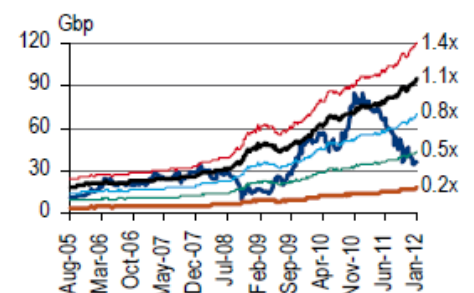
We believe that Asian Citrus will become the dominant branded orange producer in China. A positive share-price outlook is driven by (1) the continuously increasing production capacity as plantations mature and yields rise, (2) change in distribution from wholesale to branded retail, and (3) strong industry growth tailwind as China's orange consumption converges to US levels: in 2006 China's per capita orange consumption was 3.6kg versus 29.7kg for the US.

Chart 1: 1-year forward PE band (ex-BA)



Source: Bloomberg, BofA Merrill Lynch Global Research

Chart 2: 1-year forward PB band



Source: Bloomberg, BofA Merrill Lynch Global Research

Stock Data

Shares / Common - Dual Listed	1.00
Price to Book Value	0.5x

Price objective basis & risk

Asian Citrus Holdings Ltd. (XCHUF)

Our PO of HK\$9.0 is based on SOTP valuation: 84% of our PO is derived from the DCF of Asian Citrus Holdings (ACH) three existing plantations. The remaining 16% is based on 5.9x FY12 earnings (RMB257mn) of BPG. We value BPG using the mean PER of mid-stream processor peer group. For key assumptions, we use a risk free rate of 2.6% and an equity risk premium of 8.9%. WACC is 13.2%. Our terminal growth rate is 3.5%.

The risks that could negatively impact the business and the achievement of our PO are (1) volatility in raw material prices, (2) uncertainty on tapping into juice business, (3) sourcing issues for trading business, and (4) natural disasters.

Brasil Foods (BRFS, C-1-7, R\$35, US\$20/ADR)

Our price objective for Brasil Foods of R\$45.00 (US\$24.50/ADR) represents a mix of 50% of our DCF value and 50% of our target 2012E EV/EBITDA multiple valuation at 9.0x. Our nine-year DCF is based on a WACC of 11.2% in BRL terms (cost of equity = 13.3%, cost of debt = 9.0% and beta = 1.0) and 4% terminal growth. Following CADE's ruling, we assume BRF will sell assets at a total value of R\$2.2bn. Downside risks to our price objective are (1) BRF takes longer to revert worse sales mix, pressuring margins, (2) more competitive market leads to lower margins, (3) a weaker-than-expected recovery in export markets, (4) inherent proteins sector volatility (regarding supply conditions and trade barriers), (5) Brazilian real currency appreciation, jeopardizing exports growth.

China Agri-Indus (CIDHF)

Our 12-month PO of HK\$8.4 is based on 11.0x FY12E diluted EPS of HK\$0.766. We expect strong volume growth fuelled by capacity expansion and industry consolidation, combined with steady ASP growth, to drive long-term earnings growth. In the near-term, we see lessening of administrative price control to remove share price overhang and expect further earnings momentum into 2H11 driven by seasonally strong edible oil consumption and improving demand for meals and feeds.

Key risks: (1) administrative price control measures are resumed, (2) demand for edible oils or meals / feeds weaker than expected, (3) new capacity ramp-up slower than expected, (4) raw material costs higher than our forecasts leading to margin pressure and (5) government policy to restrict capacity expansion.

China BlueChem (CBLUF)

Our HK\$7.0 PO is based on our DCF analysis. We use a risk-free rate of 3.4% and an equity risk premium of 13.5%. Our terminal growth rate is 3%, in line with the long-term growth assumption for the global fertilizer industry. We assume an 8-year middle period with 10% growth and a 25% operating margin. Given stable input costs and our belief that fertilizer prices will also remain stable in the medium term, we believe the 25% operating margin assumption is conservative. Risks: (1) higher gas cost (2) inclement weather (3) delays in new capacity projects, and (4) acquisition risks.

Sinofert HLDG (SNFRF)

Our PO of HK\$1.80 is based on SOTP valuation: we value Sinofert's distribution business on 11.5x FY12E PER (ex-income from Qinghai Salt Lake Potash - QSLP) and use the market value for Sinofert's 9% stake in QSLP. The multiple we are using to value the distribution business is at 6% discount to the average peer group trading multiple. Upside and downside risks are (1) share placing to

take up parent company's stake in QSLP, (2) government policy, (3) weaker/stronger-than-expected bargaining power with suppliers, (4) lower/higher-than-expected international fertilizer prices, (5) lifting of export tariffs, and (6) government fertilizer subsidies for potash.

Smithfield Foods, Inc. (SFD, C-1-9, \$23)

Our \$28 price objective is based on our F12 est. of \$2.80 and a 10.0x multiple, a mid-cycle multiple and modestly above where the stock has traded over the last 2 years. The protein stocks have traded roughly around 9-10x forward earnings for the last 2 years, as we believe the markets were forecasting that these companies were at peak earnings levels. Given that earnings could come down from peak levels, we believe the multiple could expand to a more normalized number of 10-11x, with 10x being the basis for our new price targets.

Downside risks to our Buy rating and price objective are: 1) lower-than-expected hog prices, 2) an increase of hog supplies, 3) weaker-than-expected increase in pork domestic and international demand, and 4) higher-than-expected feed costs.

Tyson Foods, Inc. (TSN, C-1-7, \$19)

Our \$23 price objective is based on our F12 est. of \$2.25 and a 10.2x multiple, a mid cycle multiple and modestly above where the stock has traded over the last 2 years. The protein stocks have traded roughly around 9-10x forward earnings for the last 2 years as we believe the markets were forecasting that these companies were at peak earnings levels. Given that earnings could come down from peak levels, we believe the multiple could expand to a more normalized number of 10-11x, with 10x being the basis for our price objective.

Downside risks to our Buy rating and price objective are: 1) lower-than-expected chicken prices, 2) rising chicken production, 3) deterioration in protein demand due to market conditions, and 4) higher than expected feed costs.

Link to Definitions

Basic Materials

Click [here](#) for definitions of commonly used terms.

Consumer & Retail

Click [here](#) for definitions of commonly used terms.

Industrials

Click [here](#) for definitions of commonly used terms.

Analyst Certification

We, Timothy Bush, Fernando Ferreira, CFA and Ryan Oksenhendler, hereby certify that the views each of us has expressed in this research report accurately reflect each of our respective personal views about the subject securities and issuers. We also certify that no part of our respective compensation was, is, or will be, directly or indirectly, related to the specific recommendations or view expressed in this research report.

30 January 2012

APR - Small Caps Coverage Cluster

Investment rating	Company	BofA Merrill Lynch ticker	Bloomberg symbol	Analyst
BUY				
	Asian Citrus Hol	ACTFF	ACHL LN	Timothy Bush
	Asian Citrus Holdings Ltd.	XCHUF	73 HK	Timothy Bush
	China Agri-Indus	CIDHF	606 HK	Timothy Bush
	China BlueChem	CBLUF	3983 HK	Timothy Bush
	Kingboard Laminates Holdings Ltd	KGBLF	1888 HK	Timothy Bush
NEUTRAL				
	Kingboard Chemicals Holdings	KBDCF	148 HK	Timothy Bush
	Lee & Man Paper	LMPMF	2314 HK	Timothy Bush
	Nine Dragons Paper Holdings	NDGPF	2689 HK	Timothy Bush
UNDERPERFORM				
	Sinofert HLDG	SNFRF	297 HK	Timothy Bush
RVW				
	Sino-Forest Corp	YTRE	TRE CN	Timothy Bush

LatAm - Agribusiness and Food Coverage Cluster

Investment rating	Company	BofA Merrill Lynch ticker	Bloomberg symbol	Analyst
BUY				
	Adecoagro	AGRO	AGRO US	Fernando Ferreira, CFA
	Brasil Foods	BRFS	BRFS US	Fernando Ferreira, CFA
	Brasil Foods	XBRFF	BRFS3 BZ	Fernando Ferreira, CFA
	Cosan Ltd	CZZ	CZZ US	Fernando Ferreira, CFA
	Cosan SA Ind Com	CSIDF	CSAN3 BZ	Fernando Ferreira, CFA
	Sao Martinho	SRTOF	SMT03 BZ	Fernando Ferreira, CFA
NEUTRAL				
	Fertilizantes Heringer	XFTLF	FHER3 BZ	Isabella Simonato
	Minerva	XMASF	BEEF3 BZ	Fernando Ferreira, CFA
	SLC Agricola	SLCJF	SLCE3 BZ	Fernando Ferreira, CFA
	SQM	SQM	SQM US	Fernando Ferreira, CFA
UNDERPERFORM				
	JBS	JBSAF	JBSS3 BZ	Fernando Ferreira, CFA
	M. Dias Branco	XDMIF	MDIA3 BZ	Fernando Ferreira, CFA
	Marfrig	XGFRF	MRFG3 BZ	Fernando Ferreira, CFA

US - Food & Beverage Coverage Cluster

Investment rating	Company	BofA Merrill Lynch ticker	Bloomberg symbol	Analyst
BUY				
	Beam Inc.	BEAM	BEAM US	Bryan D. Spillane
	ConAgra Foods, Inc.	CAG	CAG US	Bryan D. Spillane
	Constellation Brands	STZ	STZ US	Bryan D. Spillane
	Dean Foods Company	DF	DF US	Ryan Oksenhendler
	General Mills	GIS	GIS US	Bryan D. Spillane
	Green Mountain Coffee Roasters	GMCR	GMCR US	Bryan D. Spillane
	Kellogg	K	K US	Bryan D. Spillane
	Kraft Foods Inc.	KFT	KFT US	Bryan D. Spillane
	PepsiCo	PEP	PEP US	Bryan D. Spillane
	Sara Lee Corporation	SLE	SLE US	Bryan D. Spillane
	Smithfield Foods, Inc.	SFD	SFD US	Ryan Oksenhendler
	The Coca Cola Company	KO	KO US	Bryan D. Spillane
	The Hershey Company	HSY	HSY US	Bryan D. Spillane
	Tyson Foods, Inc.	TSN	TSN US	Ryan Oksenhendler
NEUTRAL				
	Bunge Limited	BG	BG US	Bryan D. Spillane
	Campbell Soup Company	CPB	CPB US	Bryan D. Spillane
	Coca Cola Enterprises	CCE	CCE US	Bryan D. Spillane

30 January 2012

US - Food & Beverage Coverage Cluster

Investment rating	Company	BofA Merrill Lynch ticker	Bloomberg symbol	Analyst
	Diamond Foods, Inc	DMND	DMND US	Bryan D. Spillane
	Dr Pepper Snapple Group	DPS	DPS US	Bryan D. Spillane
	H.J. Heinz Company	HNZ	HNZ US	Bryan D. Spillane
	Mead Johnson Nutrition Company	MJN	MJN US	Bryan D. Spillane
UNDERPERFORM				
	Archer Daniels Midland Company	ADM	ADM US	Bryan D. Spillane
	Dole Foods	DOLE	DOLE US	Ryan Oksenhendler
	Molson Coors Brewing Company	TAP	TAP US	Bryan D. Spillane
	Seneca Foods Corporation	SENEA	SENEA US	Bryan D. Spillane
	Treehouse Foods Inc.	THS	THS US	Bryan D. Spillane

iQmethodSM Measures Definitions

Business Performance	Numerator	Denominator
Return On Capital Employed	$\text{NOPAT} = (\text{EBIT} + \text{Interest Income}) * (1 - \text{Tax Rate}) + \text{Goodwill Amortization}$	Total Assets – Current Liabilities + ST Debt + Accumulated Goodwill
Return On Equity	Net Income	Shareholders' Equity
Operating Margin	Operating Profit	Sales
Earnings Growth	Expected 5-Year CAGR From Latest Actual	N/A
Free Cash Flow	Cash Flow From Operations – Total Capex	N/A
Quality of Earnings		
Cash Realization Ratio	Cash Flow From Operations	Net Income
Asset Replacement Ratio	Capex	Depreciation
Tax Rate	Tax Charge	Pre-Tax Income
Net Debt-To-Equity Ratio	Net Debt = Total Debt, Less Cash & Equivalents	Total Equity
Interest Cover	EBIT	Interest Expense
Valuation Toolkit		
Price / Earnings Ratio	Current Share Price	Diluted Earnings Per Share (Basis As Specified)
Price / Book Value	Current Share Price	Shareholders' Equity / Current Basic Shares
Dividend Yield	Annualised Declared Cash Dividend	Current Share Price
Free Cash Flow Yield	Cash Flow From Operations – Total Capex	Market Cap. = Current Share Price * Current Basic Shares
Enterprise Value / Sales	$\text{EV} = \text{Current Share Price} * \text{Current Shares} + \text{Minority Equity} + \text{Net Debt} + \text{Other LT Liabilities}$	Sales
EV / EBITDA	Enterprise Value	Basic EBIT + Depreciation + Amortization

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30 January 2012

Important Disclosures

Investment Rating Distribution: Chemicals Group (as of 01 Jan 2012)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	46	42.99%	Buy	28	68.29%
Neutral	36	33.64%	Neutral	22	73.33%
Sell	25	23.36%	Sell	14	56.00%

Investment Rating Distribution: Food Group (as of 01 Jan 2012)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	32	45.07%	Buy	18	62.07%
Neutral	19	26.76%	Neutral	12	70.59%
Sell	20	28.17%	Sell	14	73.68%

Investment Rating Distribution: Industrials/Multi-Industry Group (as of 01 Jan 2012)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	52	61.90%	Buy	38	86.36%
Neutral	20	23.81%	Neutral	14	82.35%
Sell	12	14.29%	Sell	9	81.82%

Investment Rating Distribution: Global Group (as of 01 Jan 2012)

Coverage Universe	Count	Percent	Inv. Banking Relationships*	Count	Percent
Buy	2029	52.00%	Buy	1337	72.11%
Neutral	1009	25.86%	Neutral	657	71.34%
Sell	864	22.14%	Sell	487	60.20%

* Companies in respect of which BofA Merrill Lynch or one of its affiliates has received compensation for investment banking services within the past 12 months. For purposes of this distribution, a stock rated Underperform is included as a Sell.

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Investment rating	Total return expectation (within 12-month period of date of initial rating)	Ratings dispersion guidelines for coverage cluster*
Buy	≥ 10%	≤ 70%
Neutral	≥ 0%	≤ 30%
Underperform	N/A	≥ 20%

* Ratings dispersions may vary from time to time where BofA Merrill Lynch Research believes it better reflects the investment prospects of stocks in a Coverage Cluster.

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30 January 2012

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