

Asia Hong Kong

Consumer

Deutsche Bank



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China Wheat

China Wheat 101 guide

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Ten questions on wheat in China

Global climate changes are causing more frequent occurrences of drought. To address investors' questions on the current severe drought conditions that are affecting wheat output in China, this report serves as a handy guide to understand the dynamics of supply/demand, price movements, and earnings sensitivity of instant noodles companies to wheat price volatility in China.

Kinds of wheat grown in China

Two kinds of wheat are grown in China (winter wheat and spring wheat). Winter wheat accounts for c.84% of the total wheat planting area. It is mainly produced in the North China plain, Huang Huai River and Yangtze River regions. Spring wheat takes up c.16% of the total wheat planting area and is grown in cold areas north of the Great Wall. Gansu, Xinjiang, and Tibet grow spring and winter wheat.

Wheat supply and demand in China

The USDA estimates China consumed 107mt of wheat in the years 2009 and 2010. Among which, 81mt of wheat will be used in food, 9.5mt in feed, 10.5mt for industrial purposes, and the remaining for other uses. On the supply side, China produced 112.5mt of wheat and the year-end stock was 45.7mt in 2009 and 2010.

Current drought situation of wheat harvest

In the eight major winter wheat producing provinces, the acreage of drought-hit winter wheat cropland was 91.78mu as of 20 Feb. The drought-hit winter wheat acreage was 39.6% of the total planting area in the eight provinces at the worst time. Industry experts estimate winter wheat output may dip 1.7mt to 106.3mt this year. If drought conditions persist until April, wheat output in the drought-hit regions will drop by 10-15%. The PRC government has implemented measures to combat drought. An official said wheat output will not be affected by drought.

China was a net wheat exporter most of the years

Over most of the past decade, China was a net wheat exporter. The exceptions were in 2004 and 2005, when China imported a lot of cheaper US wheat. The price gap between China and US wheat narrowed in 2006. In 2007-09, China exported a lot of wheat to take advantage of higher global wheat prices.

Wheat price closely monitored and controlled by PRC government

Wheat prices in China are relatively less volatile than global wheat prices. The PRC government closely monitors and controls wheat prices through: 1) national reserve and 2) setting floor procurement prices on wheat. The government will release reserves if wheat prices are too high. The PRC government raised floor procurement prices every year since 2008 so as to protect farmers' interests.

Earnings sensitivity of F&B companies to wheat price changes

Wheat and flour are key raw materials for instant noodles companies, e.g., Tingyi and Uni-President China (UPC). Our earnings sensitivity shows a 10% increase in flour prices could lead to 7% and 6% earnings drop for Tingyi and UPC.

Industry valuation and risks

For the China consumer staple companies, we use DCF and PE/G as the key valuation parameters. Downside risks include rising input costs and competition. Upside risks include stronger sales from improving macro, strong product innovation pipeline, good control on input costs, and A&P spend.

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Industry Update

Top picks

Tingyi (0322.HK),HKD17.56	Hold
China Foods (0506.HK),HKD4.42	Sell

Companies featured

Tingyi (0322.HK),HKD17.56			Hold
	2009A	2010E	2011E
P/E (x)	24.6	27.7	24.9
EV/EBITDA (x)	12.3	15.0	11.5
Price/book (x)	9.5	7.6	6.6

Ten questions on wheat in China

1. What kinds of wheat are grown in China?

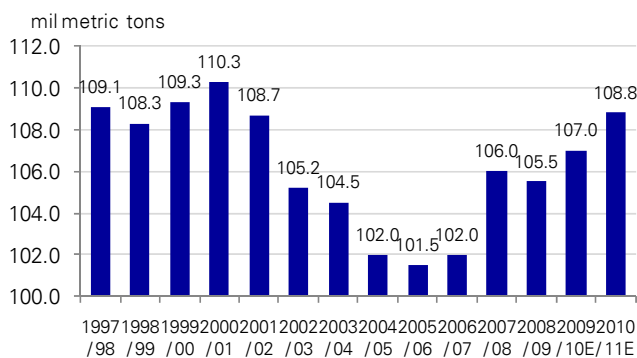
- Wheat is the second most important grain crop after rice in China. Wheat can be divided into **winter wheat** and **spring wheat** through its growth cycle.
1. **Winter wheat** accounts for roughly 84% of the total wheat planting area in China. It is mainly produced in the North China plain, the Huang-Huai River region, and the Yangtze River region.
 2. **Spring wheat** accounts for around 16% of the total wheat planting area in China. It is mainly produced in cold areas north of the Great Wall.

Gansu, Xinjiang, and Tibet all grow winter and spring wheat.

2. How much wheat is consumed in China every year?

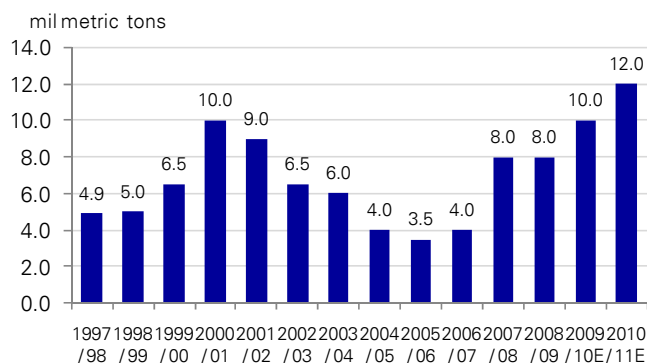
- The USDA data show China consumed 105.5m tons of wheat in 2008 and 2009. Around 7.6% of wheat consumed was in animal feed.
- By 2009 and 2010, the USDA estimated China would consume 107m tons of wheat. Among which, 81m tons was for food, 9.5m tons for feed, 10.5 tons for industrial uses, and 6.03m tons for other uses (seed and loss, etc).
- The structure of domestic wheat consumption has changed a lot over the past 20 years. The use of wheat in making flour and seed is declining, while the use in the feed and industrial areas is increasing.

Figure 1: China's annual wheat consumption



Source: USDA

Figure 2: China's annual wheat consumption (feed)

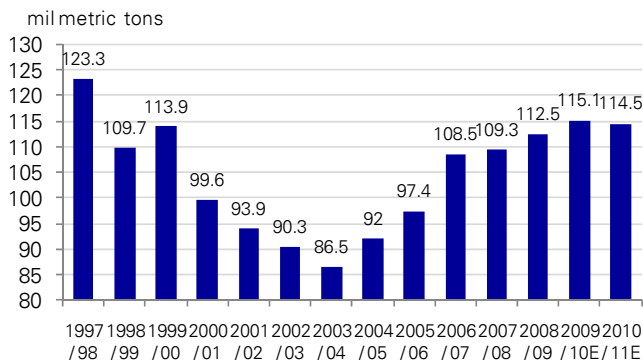


Source: USDA

3. How much wheat is produced in China every year?

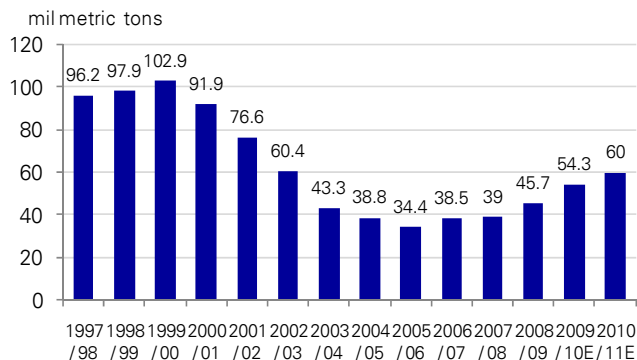
- USDA data show China produced 112.5m tons of wheat in 2009 and 2010, and the wheat year-ending stock was 45.7m tons.

Figure 3: China's annual wheat output



Source: USDA

Figure 4: China's wheat ending stocks by year-end

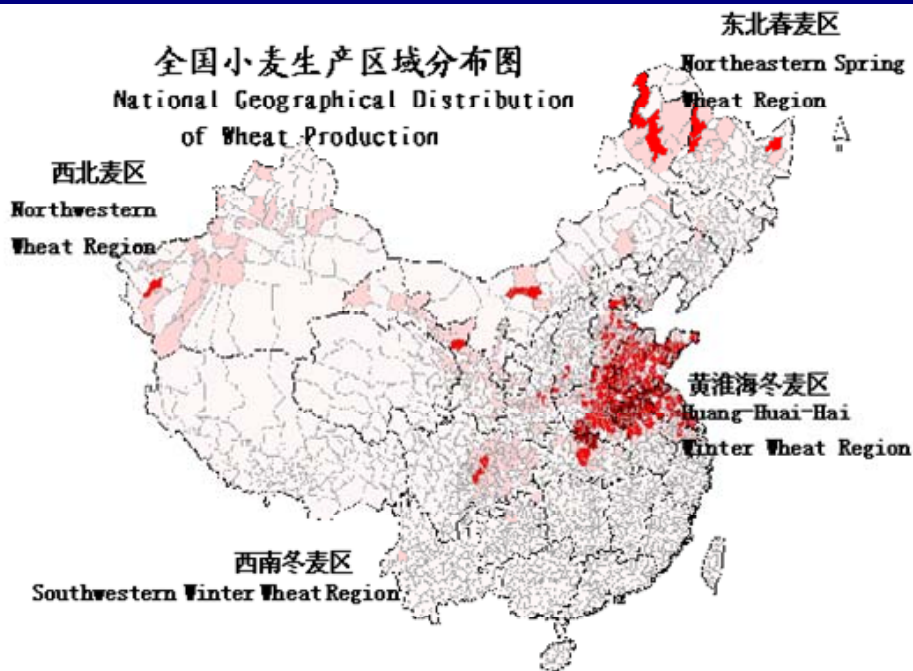


Source: USDA

4. Where are the major wheat growing regions in China?

- There are four major wheat growing regions in China, namely: 1) the northeastern spring wheat region, 2) the northwestern wheat region, 3) the Huang-Huai-Hai winter wheat region, and 4) the southwestern winter wheat region.

Figure 5: Major wheat planting areas in China



Source: Ministry of Agriculture

Figure 6: Major wheat planting regions and harvest time in China

Production Areas	% of total country (Area)	% of total country (Yield)	Including Provinces	Sowing Time	Harvest Time	Growing Period (in days)	Comments
Northeast Spring Wheat Region	8%	8%	Heilongjiang, Jilin, majority of Liaoning, northeast part of Inner Mongolia	Mid-Apr	Around July 20	90	One year, one harvest
North Spring Wheat Region	3%	1%	West of Daxinganling, North of Great Wall, part of Inner Mongolia, northern part of Hebei, northern part of Shaanxi, northern part of Shanxi	Mid-Mar to Mid-Apr	Early Jul to Late Aug	90-120	One year, one harvest, few places can be two years, three harvests
Northwest Spring Wheat Region	4%	5%	Gansu, Ningxia, western part of Inner Mongolia, eastern part of Qinghai	Early-Mar	Mid-Jul to Mid-Aug	120-130	One year, one harvest
Xinjiang Winter and Spring Wheat Region	5%	4%	Northern part of Xinjiang	(S): Early-Apr	(S): Early-Aug	/	One year, one harvest
			Southern part of Xinjiang	(S): Late Feb to Early Mar (W): Mid-Sep	(S): Mid-Jul (W): Late-Jul to Early Aug (next year)	/	One year, one harvest, or One year, two harvests
Qing Zang Spring Winter Wheat Region	1%	1%	Tibet, Qinghai, southwestern part of Gansu, western part of Sichuan, northwestern part of Yunan	(W): Late-Sep (S): Late-Mar to Early-Apr	(W): Late-Aug to Mid-Sep (next year) (S): Late-Aug to Mid-Sep	(W): 330 - one year (S): 140-170	One year, one harvest
North Winter Wheat Region	9%	6%	Southern part of Hebei, mid/southeastern part of Shanxi, northern part of Shaanxi, southern part of Liaoning, southern part of Ningxia, part of Gansu, Beijing, Tianjin	Early to Mid-Sep	Mid- to Late June (next year)	260	Mainly in two year, three harvests. Also has one year, one harvest and one year, two harvests
Huang-Huai Winter Wheat Region	45%	48%	Shandong, most part of Henan, mid/southern part of Hebei, northern part of Jiangsu, northern part of Anhui, Shaanxi Guanzhong, southwestern part of Shanxi, Gansu Tianshui	Early-Oct	Late-May to Early-Jun (next year)	230	Mainly in one year, two harvests, also have two year, three harvests, and one year one harvest
Yangtze River Middle and Downstream Winter Wheat Region	12%	15%	Shanghai, Zhejiang, Jiangxi, part of Jiangsu, part of Anhui, part of Hubei, part of Hunan, Henan Xinyang	Mid to Late-Oct to Early to Mid-Nov	Late-May (next year)	200	Mainly in one year, two harvests. Few places can be one year, three harvests
Southwest Winter Wheat Region	13%	12%	Guizhou, most parts of Sichuan, most parts of Yunan, southern part of Shaanxi, southeastern part of Gansu, western part of Hubei, western part of Hunan	Late-Oct to Early-Nov	Early to Mid-May (next year)	180-200	"Winter wheat and two seasons rice"-three harvests
South China Winter Wheat Region	2%	1%	Fujian, Guangdong, Guangxi, Hainan, Taiwan, southern part of Yunan	Mid to Late-Nov	Mid-Mar to Early-Apr (next year)	120	One year, three harvests

Source: PRC government

5. Will the current drought situation affect the wheat harvest?

- In the eight major winter wheat producing provinces (including Hebei, Shanxi, Anhui, Jiangsu, Henan, Shandong, Shaanxi, and Gansu), the acreage of drought-hit winter wheat cropland was 96.11m as of February 4, 101.28m mu as of February 10, 108.24m mu as of February 13, 99.16m mu as of February 17, and 91.78m mu as of February 20. In addition, the heavy drought acreage was 15.06m mu as of February 10, 23.90m mu as of February 13, 18.02m mu as of February 17, and 16.82m mu as of February 20. The drought began in October 2010 and lasted until now, and drought conditions may persist into the near future.
- The drought-affected winter wheat acreage accounted for 39.6% of the total planting areas in the eight provinces at the worst time.

- The winter wheat planting areas in the drought-affected provinces accounted for 76.46% of the national total planting areas, and the output accounted for 81.95% of the total national output. The wheat consumption in the drought-affected regions accounted for 76.45% of total domestic wheat consumption.
- The recent rainfall provided only a small benefit to the drought areas. The water demands of crops increase as the temperature rises, while the drought impact may still last. According to weather forecasts, the rainfall in north China and parts of the Yellow River and Huai River regions during February and March will continue to be of little relief and the drought will continue.
- Industry experts estimate winter wheat output may reduce by 1.7m tons to 106.3m tons. If the drought is to last into April, output in drought-hit regions will be 10-15% lower.
- FAO said in its report published on February 15 that the output of China wheat to be reaped in June is at risk from recurring drought conditions.
- The spokesman of the Ministry of Foreign Affairs said on February that the domestic wheat reserve is sufficient to meet demand. China wheat imports (based on quota) are also small, therefore wheat imports to China will not have much of an impact on global wheat prices.
- An official from the Ministry of Agriculture (MoA) said the young wheat crops have only currently entered the seedling period. The drought from last winter to this spring will have not much of an impact on this year's wheat output. The next four months from now to June is vital for output, given the sufficient rainfall and effective drought combat, China can still expect a good harvest this year. The MoA later said the daily mean temperature in most winter wheat planting regions in northern China (except west Gansu and parts of Shanxi and Hebei) has reached 3 degrees centigrade and above, which is beneficial for combating drought and irrigation.
- The central government and local governments implemented numerous measures to combat the drought conditions. Accumulated winter wheat acreage of 58.79m mu in the drought regions was irrigated as of February 17, and RMB3.4bn in central government subsidies on drought-combat facilities and materials have been allocated to county levels. The State Council issued 10 policies to support grain production at its executive meeting held on February 9, among which some were instituted for drought combat and winter wheat production support:
 1. Increase the irrigation subsidy for winter wheat (RMB10/mu);
 2. Implement the weak winter wheat fertilizer subsidy (RMB10/mu);
 3. Central finance allocated RMB1.2bn in subsidy provisions for agriculture machinery purchase, mainly as water pump spray facilities used to combat drought in winter wheat major output regions;
 4. Allocate RMB500m to set up 200,000 sheds for young rice crop breeding;
 5. Include an additional of 600 counties into the drought combat subsidy plan with RMB2m per county based on the original 600 counties in six provinces;
 6. Allocate RMB2bn into the infrastructure construction for drought-combat.

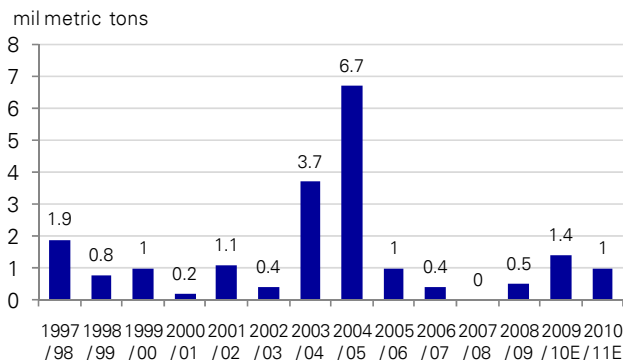
6. Is China a net importer or exporter of wheat?

- Over most of the past decade, China was a net exporter of wheat.
- The exceptions were in 2004 and 2005, when China imported a lot of wheat. During the 2001-04 period, China's wheat prices rose, while US wheat prices fell. The average producer price of US wheat in 2002-03 was higher than that in China. However, in 2004, China's wheat producer price climbed to RMB1.43/kg versus RMB1.1/kg in the US. Due

to this price gap, the volume of wheat imports increased sharply, while exports declined in 2004. In 2005, the average China's wheat producer price was RMB1.36/kg versus Rm1.06/k in the US; this price difference underpinned net imports of wheat.

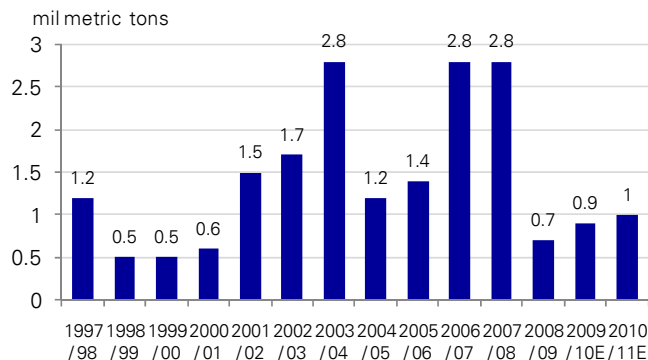
In 2006, the price gap between the US and China's wheat was narrower (i.e., RMB1.33/kg versus RMB1.41/kg). For this reason, China became a net exporter of wheat in 2006. The turning point was in 2007, when the average China's wheat producer price was RMB1.43/kg versus RMB2/kg in the US. Therefore, China exported more wheat in that year.

Figure 7: China – wheat imports



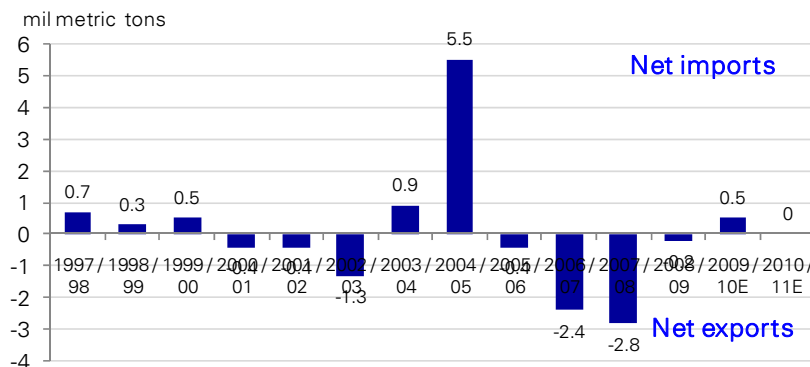
Source: USDA

Figure 8: China – wheat exports



Source: USDA

Figure 9: China is mostly a wheat net exporter



Source: USDA

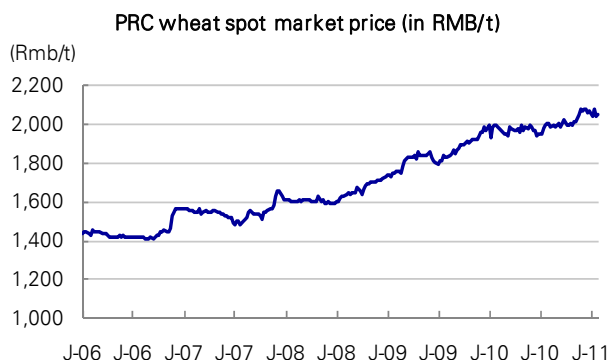
7. Does PRC government stock up wheat in national reserves?

- The central government in China has established a national reserve policy for wheat and other important grains at all administrative levels.

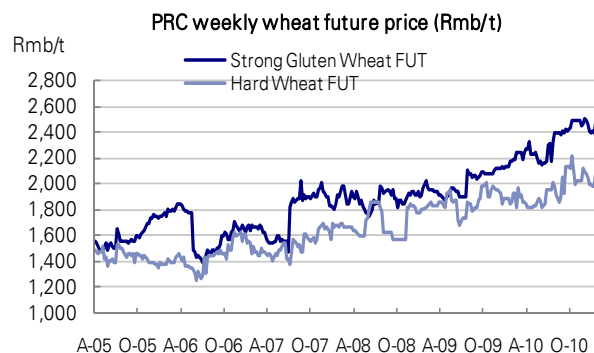
8. What are the past trends of wheat prices?

- The average wholesale wheat price was c.RMB1,933/t in 2010, up 7.7% yoy. The price increase was relatively modest under the government's manipulation through its floor procurement price policy, which is based on planting costs and revenues; this has a low correlation with global wheat prices.

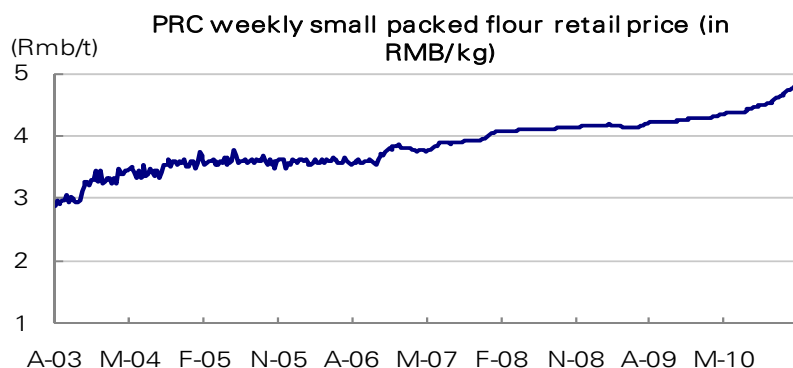
- Although the current drought conditions may decrease wheat output, the PRC government still has some reserves, and hence, the price increase will not be significant—most likely in the range of 3% to 7%.

Figure 10: PRC wheat spot market price

Source: MoC

Figure 11: PRC weekly wheat future price

Source: MoC

Figure 12: PRC weekly small packed flour retail price

Source: MoC

9. Are wheat prices controlled by the PRC government?

- Wheat prices are closely monitored and controlled by the central government in China, mainly through two measures: 1) the national reserve procurement and release and 2) setting the floor procurement price on wheat.
- If market wheat prices rise too high from a tolerant level, the central government will increase the release of national reserves at a lower price via bidding to keep market prices down. The government has also issued policies to punish market speculation activities that drive up wheat prices.
- The floor procurement price plan for wheat was implemented in six major wheat-producing regions (including Hebei, Anhui, Jiangsu, Shandong, Henan, and Hubei) in 2006 to protect farmers' interests. If the wheat market price falls below the floor procurement prices, the floor procurement price is triggered; and if the market price is higher than the floor hurdle, the policy will automatically be terminated.

- The responsible party of the floor procurement price policy is the National Grain Reserve Company. Its local subsidiaries are responsible for purchasing wheat from farmers at the floor price. In 2010, the total volume of wheat purchased at the floor procurement price in the major wheat-producing regions was 22m tons.
- The Ministry of Agriculture issued a notice to raise the 2011 floor procurement price of wheat, the floor procurement prices for per 50kg of Grade Three white wheat, red wheat, and mixed wheat were raised by RMB5, RMB7, and RMB7, respectively, to RMB95, RMB93, and RMB93.

Figure 13: National Standard Grade Three wheat – floor procurement price

	White wheat	Red wheat	Mixed wheat
2006	1.44	1.38	1.38
2007	1.44	1.38	1.38
2008	1.54	1.44	1.44
2009	1.74	1.66	1.66
2010	1.8	1.72	1.72
2011	1.9	1.86	1.86

Source: PRC government, Regions covered Hebei, Jiangsu, Anhui, Shandong, Henan and Hubei

10. What is the earnings sensitivity of HK-listed F&B companies to changes in wheat and flour prices?

Wheat and flour are key raw materials for instant noodles companies, such as, Tingyi and Uni-President China (UPC). Our earnings sensitivity shows a 10% increase in the flour price could lead to a 7% and 6% drop in earnings for Tingyi and UPC, respectively. We believe the noodles chain Ajisen also uses flour in making noodles, but they do not disclose the COGS breakdown for flour. The company mentioned raw materials account for only 90% of COGS. Hence, we cannot do an earnings sensitivity analysis of Ajisen's flour price.

Figure 14: Earnings sensitivity to price changes of different raw materials

	Major raw materials as % of COGS	Earnings impact from 10% increase in raw material price
Tingyi	Palm oil: 6%	-6%
	Flour/wheat: 8%	-7%
	Sugar: 3%	-3%
Uni-President China	Palm oil: 6%	-7%
	Flour/wheat: 4%	-6%
	Sugar: 8%	-11%
	Juice concentrate: 4%	-6%

Source: Deutsche Bank, company data

Appendix 1

Important Disclosures

Additional information available upon request

Disclosure checklist

Company	Ticker	Recent price*	Disclosure
Tingyi	0322.HK	18.00 (HKD) 25 Feb 11	8
China Foods	0506.HK	4.43 (HKD) 24 Feb 11	6,8

*Prices are sourced from local exchanges via Reuters, Bloomberg and other vendors. Data is sourced from Deutsche Bank and subject companies.

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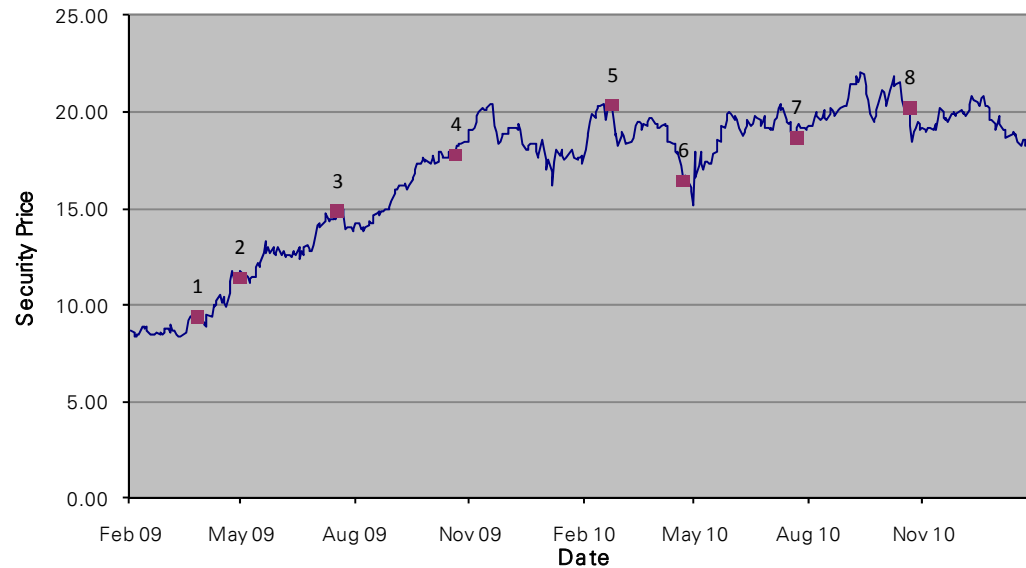
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Historical recommendations and target price: Tingyi (0322.HK)

(as of 2/25/2011)



Previous Recommendations

- Strong Buy
- Buy
- Market Perform
- Underperform
- Not Rated
- Suspended Rating

Current Recommendations

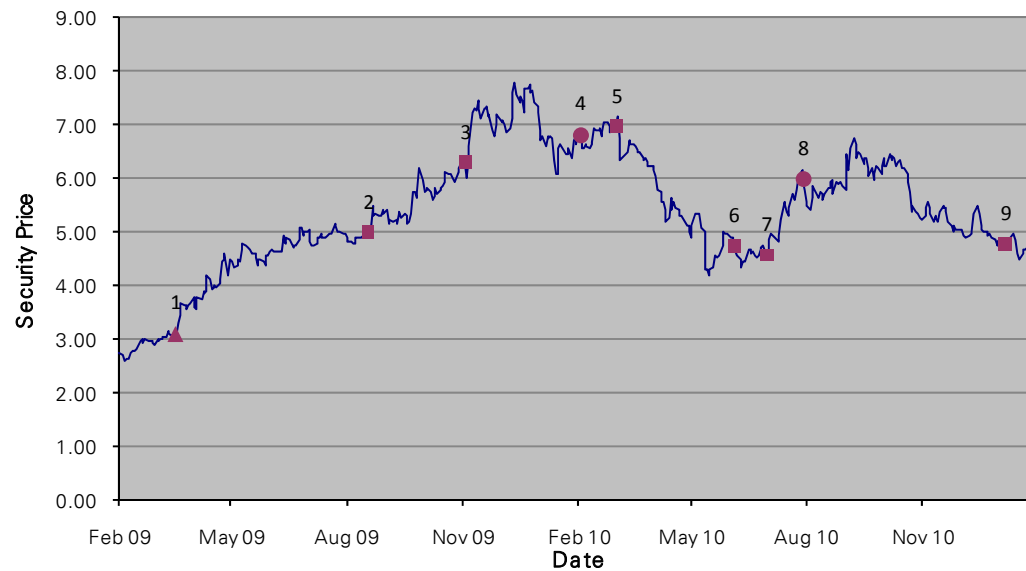
- Buy
- Hold
- Sell
- Not Rated
- Suspended Rating

*New Recommendation Structure as of September 9, 2002

1.	22/4/2009:	Hold, Target Price Change HKD9.80	5.	22/3/2010:	Hold, Target Price Change HKD19.80
2.	26/5/2009:	Hold, Target Price Change HKD10.90	6.	18/5/2010:	Hold, Target Price Change HKD17.80
3.	13/8/2009:	Hold, Target Price Change HKD15.10	7.	17/8/2010:	Hold, Target Price Change HKD19.50
4.	16/11/2009:	Hold, Target Price Change HKD19.30	8.	16/11/2010:	Hold, Target Price Change HKD20.90

Historical recommendations and target price: China Foods (0506.HK)

(as of 2/24/2011)



Previous Recommendations

- Strong Buy
- Buy
- Market Perform
- Underperform
- Not Rated
- Suspended Rating

Current Recommendations

- Buy
- Hold
- Sell
- Not Rated
- Suspended Rating

*New Recommendation Structure as of September 9, 2002

1.	13/4/2009:	Upgrade to Buy, Target Price Change HKD4.00	6.	30/6/2010:	Hold, Target Price Change HKD5.06
2.	13/9/2009:	Buy, Target Price Change HKD5.85	7.	26/7/2010:	Hold, Target Price Change HKD4.10
3.	29/11/2009:	Buy, Target Price Change HKD6.80	8.	24/8/2010:	Downgrade to Sell, HKD4.10
4.	28/2/2010:	Downgrade to Hold, Target Price Change HKD6.35	9.	1/2/2011:	Sell, Target Price Change HKD4.30
5.	29/3/2010:	Hold, Target Price Change HKD6.12			

Equity rating key

Equity rating dispersion and banking relationships

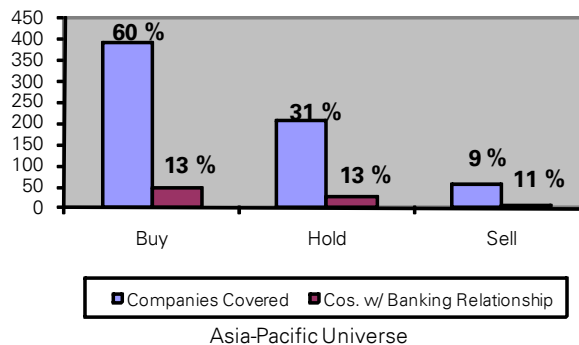
Buy: Based on a current 12- month view of total shareholder return (TSR = percentage change in share price from current price to projected target price plus projected dividend yield) , we recommend that investors buy the stock.

Sell: Based on a current 12-month view of total shareholder return, we recommend that investors sell the stock

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2. Ratings definitions prior to 27 January, 2007 were:
 - Buy: Expected total return (including dividends) of 10% or more over a 12-month period
 - Hold: Expected total return (including dividends) between -10% and 10% over a 12-month period
 - Sell: Expected total return (including dividends) of -10% or worse over a 12-month period



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